STUDENT SATISFACTION AMONG SELECT DEMOGRAPHIC GROUPS AT A FLORIDA COMMUNITY COLLEGE

By

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To my father, Andrew Hornyak, who made me believe
To my mother, Margaret Hornyak, who saw me through
To my children, David and Bethany who put up with it all and spurred me on
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Student retention and attrition rates are becoming issues of heightened interest in Florida community colleges as enrollment growth has flattened and as funding is being increasingly linked to program completion and job placement or transfer, rather than enrollment. While several theory-based models of retention exist, most address university settings and, as such, do not appropriately address attrition/retention concerns at community colleges whose students are broadly heterogenous. The social and economic implications of managing student enrollments at community colleges along with institutional funding implications, make a systemic focus on the needs of diverse populations integral to institutional health, as well as student success. Central to this focus is an examination of the varying expectations, attitudes, and perceptions with regard to education, which are characteristic of students attending community colleges. Examining the satisfaction and perceptions of various student groups on campus in terms of a student-college transaction, can help to provide baseline information critical to the

design and/or selection of initiatives aimed at shaping the campus ecology and creating a staying environment.

The focus of this study was to determine whether select student target groups at a community college shared common perceptions of, and satisfaction with, their institution by examining and correlating mean group levels of satisfaction with facilities, services, and instruction. Student satisfaction data were drawn from a Florida community college that has recently begun a campaign to improve student persistence by holistically redesigning the campus environment.

CHAPTER 1
INTRODUCTION

Student retention and attrition rates, always a concern at institutions of higher education, are becoming issues of heightened interest and increased scrutiny as community college funding in Florida and other states is being linked to program completion and job placement or transfer, rather than enrollment. As a result, increased activity is now taking place in American higher education to identify and implement new institutional strategies for improving student retention. Central to this focus is an investigation of the many complex factors that influence student decisions to leave an institution. Community colleges, with their heterogeneous population, face a particularly daunting task since their nontraditional students often do not possess the goal-orientation, life situation, or academic skills that are characteristic of educational persistence. These diverse students, representing a cross-section of American culture, bring with them a variety of expectations, attitudes, and perceptions with regard to education, which may influence their success.

Over the past 50 years, community colleges, with their open-door policy, have effected remarkable changes in American education. Spurred by low cost, geographic accessibility, and the ready availability of financial aid, enrollments at community colleges have grown from just over 500,000 in 1960 to close to 6 million by 1998, with an incredible increase of 38.4% between 1975-1994 (Almanac of Higher Education, 1995; Phillippe, 1997). Currently, almost half of first-time students report working

toward either an associate's degree or a certificate (National Center of Education Statistics, 1994). This growth has been accompanied by a major change in the composition of the student body, which includes still growing numbers of ethnic minorities, a large percentage of part-time students, a greater proportion of women, and many whose prior secondary performance, postsecondary performance, or both has been marginal (U.S. Dept. of Commerce, 1991). Nearly two-thirds of all community college students attend school part-time: 58% of the enrollees are women, and during 1992-93, 46% of enrolled students also held full-time jobs (Phillippe, 1997). Older students, who comprise the bulk of the community college population, are very likely to work long hours: Fifty-eight percent of students between the ages 23 and 40 currently work full-time (Phillippe, 1997). While the mix of ethnic and racial minorities varies greatly by geography, minorities now make up 28% of the student body at community colleges (Phillippe, 1997). The profile of recent high-school graduates entering the community college has also changed. Howe and Strauss (1993) characterize these students as the "13th Generation," a diverse cohort that is ethnically, economically, and culturally different from their predecessors. The fact that today only 43% of America's higher education students can be considered traditional (i.e., students under 25 who attend a 4-year institution full-time) further complicates the enrollment management challenge (Martens, Lara, Cordova, & Harris, 1995). Coming of age with a consciousness shaped by the Challenger explosion, the Persian Gulf War, AIDS, and a presidential scandal, this population of less than optimistic "after-boomers" presents varied goals, needs, and problems (Martens, Lara, Cordova, & Harris, 1995).

The success of the community college in reaching out to those not being served by traditional higher education, paradoxically, now threatens its funding base. Criticisms

are focused on the fact that few students who begin their education at the community college attain degrees, compared to those beginning postsecondary study at universities. Nationwide, only 40% of an entering freshman class at a 2-year public community college will eventually graduate (Noel & Levitz, 1987). U.S. Census figures from 1991 indicate that of all 2-year college students in October 1990, only 23% were enrolled in some type of postsecondary institution one year later. Among students who began their post-secondary education at a community college in 1989-90, only 37% had completed a degree by 1994 (U.S. Department of Education, 1990). This rate was fairly constant for black, Hispanic, and white students, but did vary by age and sex; older students and female students were less likely to be enrolled a year later than younger students and males (U.S. Department of Commerce, Bureau of the Census, 1991). While the focus of the university has historically commingled the acquisition of professional career preparation skills with the values of education for education's sake, Cohen and Brawer (1987) note that the community college focus on introductory or enhanced job skills has often led to student departure or stopping-out prior to degree completion. Ironically, this phenomenon can make student-defined success (i.e., leaving school upon achieving self-declared goals rather than achieving a degree) appear statistically as an institutional failure.

The social and economic implications of managing student enrollments at community colleges, as well as institutional funding implications, make a systematic focus on student perceptions an important issue. With the predominant enrollment pattern of community college students being one of uncertainty and varied purposes, accepting discontinuity in enrollment is a theoretical given that is neither popular nor practical (Fenske & Hughes, 1989).

In response to dealing with an "environmental sea of external circumstances" (Jonsen, 1986, p. 6), the concept of campus ecology, an application of an interactionist perspective that focuses on the student-college transaction, examines the importance of affect on student satisfaction with their institutional environment (Huebner, 1989). Campus ecology, a spin-off of a more general movement known as social ecology, seeks to "investigate the intricate relationship between human beings and their environments" (Blocher, 1978, p.71). Student-institution fit, which is directly related to the theoretical concept of person-environment interaction, emphasizes both how to help students adapt to their college environment and how to adapt the campus environment to students (Williams, 1989). Given that our community colleges are faced with rapid demographic, economic, political, organizational, technological, social, and cultural changes, there follows a need to understand and develop structures to deal with environmental factors (Jonsen, 1986). The campus ecology approach posits that student growth and development are best fostered by interventions that create "campus environments which potentiate students as physical, mental, social and spiritual beings" (Western Interstate Commission for Higher Education, 1989, p. 2). In order to create these nurturing environments, it is reasonable to assume that colleges must collect the data to develop demographic profiles that accurately reflect student characteristics and perceptions. These profiles can then serve as guideposts for action.

The question arises as to whether community colleges, with their heterogeneous and largely commuter populations, can effectively develop interventions that universally impact the personal growth, retention, and success of an ever-broadening spectrum of students. In regard to commuter students, Forrester (1978) found that subgroups of commuter students differ more from each other than from residential students,

concluding that commuter students should be considered a heterogeneous group rather than a somewhat amorphous homogeneous population. Acknowledging that the diversity of students and the range of variables are too numerous to individually address, the ecosystem approach "attempts to reduce student problems, not through the treatment of students but through treatment of the environment which shapes student behavior" (Kaiser, 1978, p. 8). Although attempts to assess student satisfaction at the university level have been numerous, well-documented, and often successful (Astin, 1978; Pascarella & Terenzini, 1980; Tinto, 1987), community colleges with open-admissions have had little need for and scant experience with such initiatives. While the temptation to replicate university models for enrollment management might be great, Creamer (1989) warns that, "Student Development educators in the community college must not look solely to models in four-year colleges and universities for guidance or goal setting. It is unrealistic to expect similar outcomes in the two types of colleges" (Creamer, 1989, p. 36).

Statement of the Problem

Student satisfaction with their institutional environment, a subjective measure of perceptions regarding the college experience, has been identified by campus ecologists/social interactionists (Blocher, 1978; Huebner, 1989; Jonsen, 1986) as an important component in student retention and is, therefore, a topic of interest to enrollment managers. This study was designed to explore the perceptions and relative satisfaction levels of students at a 2-year public community college. The focus of this study was to determine whether selected student target groups (gender, race/ethnicity, enrollment status, and age) varied significantly in their response to questions on a student

satisfaction inventory. Research involved an analysis of mean group data in order to determine if there was consistency of response among targeted groups.

Answers to the following questions have been sought in the study:

1. What is the correlation (consistency) among mean item relative satisfaction ratings obtained from male and female students on the Student Satisfaction inventory?

2. What is the correlation (consistency) among mean item relative satisfaction ratings obtained from (a) Caucasian students and African American students, (b) Caucasian students and Hispanic students, and (c) African American students and Hispanic students on the Student Satisfaction inventory?

3. What is the correlation (consistency) among mean item satisfaction ratings obtained from part-time students and full-time students on the Student Satisfaction Inventory?

4. What is the correlation (consistency) among mean item relative satisfaction ratings obtained from the following age groups: (a) students 18 years of age and under and students ages 19-24, (b) students 18 years of age and under and students ages 25-34, (c) students 18 years of age and under and students ages 35-44, (d) students ages 19-24 years and students ages 25-34 years, (e) students ages 19-24 years and students ages 35-44, and (f) students ages 25-34 years and students ages 35-44.

5. What item means indicate the greatest levels of satisfaction and dissatisfaction for various demographic groups?

Limitations

This study was bound by the following restrictions:

1. The study of the consistency in relative satisfaction ratings among select target groups focused on one Florida public community college.

2. The study was limited to those students enrolled during the spring of 1999 to whom the focus institution administered in the Student Satisfaction inventory in February 1999.

3. The study did not distinguish between first-time-in-college and returning students or transfer students.

4. The ex poste facto design had an inherent weakness in that statements regarding the correlations of relative student satisfaction among select target groups do not establish causation.

5. The researcher did not control the data collection methods used by the focus institution and interpretations are based upon an analysis of secondary data.

6. The results of this study should not be generalized or projected beyond the setting from which the data was drawn.

Justification for the Study

Booming enrollments at community colleges throughout the 1960s and 1970s resulted in scant administrative concern for questions of student satisfaction or for the problem of student attrition. The open-door policy, growing availability of financial assistance, and the post-World War II baby-boom provided a growth cycle that appeared unending. With new students enrolling at a rate that far exceeded those leaving and with funding tied to enrollment, retention issues were not a priority. As the post-war baby-boom faltered and enrollments flattened, the situation gradually changed. Institutions faced with declining enrollments and therefore diminishing resources now had reason to place greater emphasis on identifying factors linked to student attrition. The arrival during the 1990s of performance-based funding has further hastened interest in retaining

students to completion and, therefore, assessing student satisfaction can more readily be promoted as an institutional priority.

Attrition/retention research by Tinto (1975, 1987, 1993), Pascarella and Terenzini (1983, 1991), and Bean and Metzner (1985), while quite extensive, originally focused exclusively on 4-year residential colleges and universities. These studies on interaction factors in student departure are neither well-suited to the study of nonresidential institutions nor applicable to community colleges populated by nontraditional students (Pascarella & Terenzini, 1983, 1991). Pascarella and Terenzini (1983) reported that the Tinto model of student-college interaction, which focuses on the person-environment fit of traditional students in residential institutions, has predictive validity for that population but is not necessarily valid for other student populations. More recent studies by Tinto (1993) and Pascarella and Terenzini (1991) address the unique variables presented by community college populations; however, the theoretical constructs developed to assess attrition/retention at 4-year institutions remain the same. Few studies on the problem of student satisfaction and retention specific to community colleges are available, and little effort has been made to develop a theoretical model specific to student satisfaction and retention at community colleges despite the fact that these institutions have considerably higher attrition rates than do 4-year institutions (Noel & Levitz, 1987).

According to Bowen (1987), environment consists of several closely interrelated parts including culture, administrative organization, curriculum, and the extra-curriculum. To this description, Peterson and Spenser (1990) add values, expectations, standards, assumptions, traditions, general atmosphere, and the behavior of people involved. Given the multitude of individual characteristics and attributes that nontraditional students bring

with them to the community college, many of which are outside of the control of the institution, it follows that colleges can positively or negatively impact students through the overall environments they create.

Working to create a campus ecosystem that seeks to enhance student satisfaction, and ultimately student success, presumes that the institutional initiatives will (a) physically or psychologically impact student awareness and (b) meet the needs of the student population being served. Considering the heterogeneity of the nontraditional community college population, the multiplicity of external demands that these students face and the fact that their social, emotional, and intellectual development occurs in different settings, one can question whether changes in campus environments will truly impact student behaviors (Andreas, 1983).

Astin (1978), using step-wise regression analysis in the 1969-70 ACE-Carnegie student satisfaction survey of 1966 freshman, noted that entering student characteristics accounted for relatively little variance in overall satisfaction ($\underline{R} = .12$). Consideration of institutional characteristics, however, increased the multiple correlation to $R = .25$, and the addition of measures of involvement resulted in a $\underline{R} = .49$ satisfaction correlation (Astin, 1978, p. 168). Astin (1978) concluded that a student's satisfaction with college "is much more dependent than other outcome measures on the characteristics of the institution and the student's involvement in the institutional environment" (p. 168). Astin's study, which analyzes perceptions of 17,771 undergraduates 3½ years after college-entry, provides some insight into the relationship between campus environments and student satisfaction at 4-year institutions; however, it does not address the community college situation.

Huebner (1989) notes that,

> Most ecosystem studies, if they include an evaluation of the outcome at all, look at variables such as change of perception. Lacking is the step of relating these outcomes to other outcomes of either more theoretical or more practical interest, such as achievement, productivity, moral development, retention, illness and so on. (Huebner, 1989, p. 192)

Astin (1978) offers that a student's subjective response to the college environment can be assessed in at least two ways: through direct student interviews and through survey instruments that obtain perceptions of a broad range of environmental factors. Hoyt (1999) adds that along with using general models of student retention, several researchers have focused on specific areas of interest, noting that such studies provide new insights into other factors that may influence attrition. For example, Braxton, Vesper, and Hossler (1995) examined the relationship between student expectations and persistence; Tomlinson-Clarke and Clarke (1996) studied the question of institutional environment and student alienation; and Berger and Braxton (1998) researched factors related to social integration. While most student satisfaction/attrition/retention studies focus on preenrollment variables, this study focused on examining student perceptions of their campus environment by way of self-reported levels of student satisfaction.

Assumptions

For the purpose of this study, several assumptions were made. It was assumed that

1. A nationally standardized student satisfaction inventory (Noel-Levitz Student Satisfaction Inventory) accurately assessed student satisfaction levels at the focus institution.

2. The focus institution provided student demographic data, longitudinal retention data, and enrollment data and allowed research use of student satisfaction inventory data.

3. The student satisfaction data provided by the focus institution for this study were representative of the target population for which generalizations have been made.

Definition of Terms

Campus ecology is an application of interactionist theory that focuses on student/college transactions.

Community college refers to a 2-year public institution that offers programs and/or courses limited to the first 2 years of postsecondary education, including a university transfer program and at least one of the following areas, occupational education and/or continuing (noncredit) education.

Commuter students are students who do not live in university or college owned housing on campus.

Dependent students refers to students who live at home with parents or a close relative who assumes parental responsibilities.

Drop-out refers to a student who leaves or withdraws from the institution and does not return for at least four consecutive terms.

Ecological perspective focuses on the impact of the campus environment on students, i.e., the way in which students and environment interact.

Ecosystem approach is a social interactionist approach that is concerned with the creation of campus environments that potentiate student growth.

Environmental press refers to the characteristic pressures, stresses, and conformity demanding influences of the college culture.

Independent students are students who live on their own; they may share an apartment or house.

Interactionism is the theoretical perspective that behavior is best understood and predicted through transactions of individuals and their environment; the idea that people are influenced systematically by their environment.

Integration refers to a process in which the individual establishes membership or fails to establish membership the college community.

Nontraditional students are age 25 or older, often those who have returned to school after a break in their education, may have a spouse and/or children, may be full or part-time student, may work full or part-time, may be a member of an underrepresented minority group, may be first-generation in college, and may be underprepared for college level work. They are typically commuter students.

Retention refers to the number and percent of first-time-in-college degree seeking students who graduate or are still enrolled after the period of time selected for this study. The focus institution measures the status after 4 years of first-time-in college degree seekers who earned as least 18 college level credits.

Stop-out is defined as a student who leaves the institution for a period of 1-4 terms but returns to the same institution for additional work or study.

Procedures

Sampling Plan

The student satisfaction, data used in this study were obtained from a 2-year Florida community college that administered the Noel-Levitz Student Satisfaction Inventory to 1200 students across four campuses enrolled in Communications I, Communications II, Prep Reading I, Prep Reading II, and several vocational /technical courses in January 1999. The college controlled for duplication of administration. Elements incorporated in this study include student demographic variables segmented by

gender, age, ethnic background, and enrollment status (part or full-time). Due to the open-door policy, the institution had very little control on the input variables. Data were examined to (a) determine the self-reported levels of mean student satisfaction, (b) determine whether student satisfaction varied by segmented groups, and (c) to determine the relative correlation (consistency) in satisfaction responses by select target groups. The following questions guided the research:

1. What were the overall results of the January 1999 Noel-Levitz Student Satisfaction Inventory administered at the focus institution?

2. What were the results of the January 1999 Noel-Levitz Student Satisfaction Inventory when segmented by identified student cohort groups (areas of greatest/least satisfaction)?

3. What was the correlation (consistency) among mean item relative satisfaction ratings for select segmented groups?

Data Collection

The following steps were used to obtain data for the study. The focus community college was asked to provide

1. overall student demographic information,

2. demographics of students surveyed with Student Satisfaction Inventory,

3. longitudinal retention data (4-year/in-house data),

4. a list of specific retention initiatives, 1998-99, and

5. results of 1998-99 Noel-Levitz Student Satisfaction Inventory, administered in January 1999.

Data Analysis

The following procedures were utilized to analyze data obtained from the focus institution:

1. Results of the Spring 1999 administration of the Noel-Levitz Student Satisfaction Inventory were obtained from the focus institution. Data utilized provided the mean satisfaction rating on 86 inventory items for the following groups: (a) females, (b) males, (c) Caucasions, (d) African Americans, (e) Hispanics, (f) part-time students, (g) full-time students, (h) students ages 18 and under, (i) students ages 19-24, (j) students ages 25-34, and (k) students ages 25-44.

2. For the purpose of examining consistency of responses, the researcher paired select target groups by (a) gender, (b) race/ethnicity, (c) enrollment status, and (d) age and entered all satisfaction mean data for each group into a data base.

3. Pearson Product Moment Correlation was run for each of the paired groups.

4. Results of the Pearson Product Moment Correlation were examined to determine consistency among mean item relative satisfaction ratings for the selected paired groups.

The nature of questions basic to this investigation and the procedures used to secure the data are those most applicable to a study utilizing a narrative-descriptive technique. Fox (1969) noted two conditions that must co-exist to justify this method, both of which exist for this study. First, there is an absence of information about a problem of educational significance, and second, the situations which could generate that information do exist and are accessible to the researcher (Fox, 1969, p. 424). Issues to be discussed in this study include differences in student satisfaction/student perceptions

among segmented target groups and include retention implications of the satisfaction levels of students at a 2-year, public, community college.

CHAPTER 2
REVIEW OF RELATED LITERATURE

The review of literature related to this study encompasses three specific areas: (a) student satisfaction and retention in the community college and (b) the interactionist perspective of campus ecology as it relates to student satisfaction, and (c) student perceptions and student satisfaction. Since the primary focus of this study is to explore differences in student perceptions of and satisfaction with the institutional environment at a community college and to discuss the potential link between these factors and student departure decisions, it seems appropriate that this review should be organized thematically by those areas.

Student Retention and Student Satisfaction

The past 30 years have seen the development of several models of college student attrition; i.e., those factors presumed to influence decisions to drop-out of an institution. The earliest models, developed independently by Spady (1970), Tinto (1975), and Pascarella (1979), were based upon Durkheim's (1951) sociological research on suicide which theorized that shared group values and social support will decrease suicide. Spady, Tinto, and Pascarella, all drew analogies between shared group values/social support and social and academic integration, suggesting that a student's sense of identification with the institution can likewise reduce voluntary departure from the college or university (Bean, 1982). More recently, however, Tucker (1999) cautions that using suicide as an analogy for student departure is extreme and may erroneously equate

departure to failure. Tinto's (1987) observation that students often leave school for positive reasons serves to further weaken the Durkheim analogy.

Spady's model of the drop-out process is recognized as the first theoretical model of attrition. This model suggests that background characteristics--i.e., family, academic potential, and socioeconomic status working in concert with grade performance, shared group values and friendship support--can lead to increased social integration, greater student satisfaction, and strengthened institutional commitment. The dynamics inherent in this mix, in turn, reduce the likelihood of dropping out (Spady, 1970). Spady (1970) asserted that,

> The dropout process is best explained by an interdisciplinary approach involving an interaction between the individual student and his particular college environment in which his attributes (i.e., dispositions, interests, attitudes, and skills) are exposed to the influences, expectations, and demands from a variety of sources (including courses, faculty members, administrations, and peers). The interaction that results provides the student with the opportunity of assimilating successfully into both the academic and social systems of the college. (p. 70)

Tinto (1975) expanded upon Spady's work on student attrition by developing a predictive model of the departure process that includes the additional factors of motivation and commitment and focuses on the importance of social and academic integration. According to Tinto, the higher the degree of integration of the student into the institution, the greater the likelihood of successful college completion. As Tinto (1987) stated,

> Colleges are seen as being made up of a cluster of social and intellectual communities comprised of students, faculty and staff, each having distinct forms of association tying its members to one another. The process of persistence in college is, by extension, viewed as a process of social and intellectual integration leading to the establishment of competent membership in those communities. (p. 120)

This theory of retention can be interpreted as relying heavily upon the premise that student satisfaction or student perceptions of operating within a comfort zone can impact their success.

Tinto's model, which is the most widely cited attrition/retention paradigm, has been subject to numerous validation efforts, with mixed findings for community colleges, especially in regard to the importance of social integration (Napoli & Wortman, 1998). Pascarella and Terenzini (1983, 1991) note that this may be due in part to the fact that commuter colleges are less likely to provide opportunities for social interaction than residential institutions, resulting in person-environment fit problems for students with high affiliation needs. More recently, Tinto (1993) has incorporated social support theory into his model by describing the positive effect of social support on adjustment to college. Tinto's acknowledgment of the importance of the psychosocial perspective is based upon the work of McCarthy, Pretty, and Catano (1990), Pearson (1990), and Jacobi (1991), who report that supportive relationships prevent and reduce the negative effects of stress and enhance an individual's ability to cope effectively with stress in specific social settings.

Another departure model, developed by Pascarella (1979), emphasizes the importance of the interaction of student background characteristics with such institutional factors as administrative policies, academic standards, and image. These environmental factors work to influence the frequency and quality of student contact with faculty members as well as with peers. This socialization, in turn, impacts student behavior and educational outcomes (Pascarella, 1979).

Work by Bean (1982) extended Pascarella's concept by looking at 10 variables (grades, practical value of the education received, sense of self-development,

repetitiveness of school life, information related to the student role, participation in decision-making, having close friends, access to desired courses, fair treatment and membership in campus organizations) that reflect a student's interaction with the institution and that the researcher identifies as factors integral to student satisfaction. According to Bean (1982), these variables are all expected to influence satisfaction, which is seen as directly linked to intent to leave and is considered positively related to dropping-out.

A "synthetic model" developed by Bean (1982) combines the various elements of the Spady, Tinto and Pascarella theories into a single model of student attrition. This model attempts to identify a student's probability of dropping-out and the reasons for that decision. The synthetic approach identifies four classes of variables--background variables, organizational variables, environmental variables, and attitudinal and outcome variables that impact intent to leave and that can be studied independently. A weakness of this model lies in the fact that "intent to leave" and the behavior of dropping-out are not the same thing. While the intent to leave variable has a high correlation with actual attrition, it should be noted that this model identifies potential, not actual drop-outs (Bean, 1982).

Additional work by Bean and Metzner (1985) developed the Nontraditional Undergraduate Student Attrition Model, which at first appeared promising for addressing community college student attrition since it took into consideration environmental variables. This model indicates that variables in a student's external environment exert more influence on student persistence than do institutional variables. For example, a student who is weak academically but who enjoys strong family support is more likely to stay in school than an academically strong student who lacks an outside support system.

The Bean and Metzner model, unlike the Tinto model, places little importance on social integration for nontraditional students. A statistical study conducted by Stahl and Pavel, (1992) to determine how closely the Bean and Metzner model fit with community college student data found it to be a weak fit, however. Using a technique identified as exploratory factor analysis on the Bean and Metzner Model and eliminating background variables (age, ethnicity/race, and gender) which cannot be changed by interaction with the college, Stahl and Pavel (1992) created the Community College Retention Model. With this model, which looks at 22 student variables, Stahl and Pavel's (1992) research determined that student satisfaction was positively related to academic achievement (as measured by GPA) and retention, although not significantly so, while academic achievement and retention were negatively related. Interestingly, over 50% of the community college students surveyed expressed a very neutral and transitory view of their institution; those with the benefit of external support experienced support for college attendance, rather than attendance at a specific school (Stahl and Pavel, 1992). Based upon these findings, community colleges may want to focus some attention on environmental factors related to student satisfaction and to building not only student but family and community loyalty to the college. Strategies that include low-cost child care, marketing initiatives that feature current and former students, a broad offering of free cultural and athletic activities, and a strong college-community volunteer program typically strengthen student ties to the institution.

While virtually every study regarding student attrition/retention attempts to identify student characteristics predictive of dropping-out, traditional psychological models have not been able to predict academic success from personality traits (Tinto, 1993) Tinto, in Napoli and Wortman (1998) notes,

> Psychological theories of departure invariably see student departure as reflecting a shortcoming or weakness in the individual, ignoring the impact of the institution on student behavior. Such theories argue that attrition among college students could be substantially reduced by improvement of student skills, by selection of students with appropriate personality traits or both. (p. 423)

Napoli and Wortman (1998) point out that psychological theories are not empirically supported as does additional research. Studies by Tinto (1993) and Pascarella and Terenzini (1991) confirm a lack of consistency in psychological profile types in attempts to correlate personality inventories with direct measures of academic success and/or persistence. This research supports earlier work by Pantages and Creedon (1978) that noted the absence of a significant relationship among motivation, personality, and attrition and led them to conclude that "personality variables should be included in any analysis of persistence or withdrawal in college [however] they cannot yet be regarded as predictive factors" (p. 75). Related research by Tinto (1993) that focuses on the relationship between standardized measures of academic ability and student drop-out rates can account for only 10-12% of the variance in student drop-out/persistence data. Taking these factors into consideration, it is apparent that much of the variance in student attrition/retention is unexplained.

Early work by Pascarella and Terenzini (1980) identifies social isolation as the single most important determinant of student drop-out rates when controlling for background and academic performance. Baron (1997) notes that the isolation factor becomes of great interest in regard to community college student retention, since most community college students are commuters. As such, these students have limited contact with the college community, perhaps no more than 12 to 15 hours per week. Lacking time to devote to making friends and becoming involved in extracurricular activities,

these students often fail to bond with their institution. This sense of alienation can be further exacerbated by placement into remedial classes resulting in a loss of self-esteem.

Noting the steady decrease in completion rates for full-time students at community colleges as reported by ACT (1983, 40% graduation rate; 1986, 37.9% graduation rate; 1990, 38.6% graduation rate), Seidman (1996) suggests that perhaps retention studies may be too narrowly focused. Rather than simply measuring program or degree completion, he recommends an analysis of course retention and a survey of nongraduating, nonreturning students to determine if their self-declared goals have been met. In light of the fact that the College Board predicts that by the end of this century there will be more students 25 years of age than under 25 years of age (White 1990), Seidman's recommendation would help to provide more accurate and thorough attrition/retention data for a population whose goals may not include degree completion.

The issue of reentry students is one that cannot be ignored when researching student satisfaction at the community college. Unlike the relative homogeneity that is still the hallmark of 4-year, residential institutions, reentry students are a distinct population with educational requirements that differ from the younger, more traditional student. "There may be an open door policy of equal access, but many may not attend college if their basic academic, vocational and personal needs are not met" (White, 1990, p. 2). It can be further surmised that older students who choose to attend will not stay unless their needs are met--and they will leave when their self-defined goals have been accomplished.

The Interactionist Perspective and Student Satisfaction

Before the proliferation of community colleges and the broad availability of federal financial aid, institutions of higher education used to deal in a social environment

that was fairly homogeneous and insulated. Students were primarily drawn from a narrowly defined socio-economic stratum, a single religious or ethnic background, and (except for perhaps Ivy League schools) a single geographic region. While the typical college student prior to the G.I. Bill of Rights was most likely a white male adolescent with a family capable of paying his tuition, today's open-door community colleges regularly welcome women, minorities, nonnative speakers, adults in mid-life career changes, and the physically challenged (Martens et al., 1995; Roueche & Roueche, 1993b). A quarter of a century ago, Cross (1971) defined the "new student" as "one whose performance at academic tasks in the past has been below average" (p. 112). Roueche and Roueche (1993b) have updated this description, using the label "at risk" for nontraditional students who may not only be underprepared but also work more than 30 hours per week, have little family support, are first generation in college, and may possibly have failure expectations. The broad range of background variables found among today's community college students lends support to Forester's (1978) early observation that subgroups of commuters differ more from each other than from residential students. As such, community college/commuter students as a group cannot be easily characterized as anything other than a dynamic population of wide variation. Addressing the needs of a melange of students whose environmental demands external to their educational milieu are widely divergent presents particular challenges to community college administrators charged with enrollment management.

Pace (1995) notes that the effect of any given institutional environment may be quite different for students of varying entering characteristics due to the unique "environmental press"; i.e., pressures and stresses of a particular college culture (p. 4). For underprepared new students, a school with rigorous academic standards may thus be

perceived as uncaring and hostile, while an academically strong student may thrive with the challenge. A commuter student with high affiliation needs may be unfulfilled at a community college with little or no emphasis on social integration, while students with strong external support may be oblivious to the presence or absence of social support factors. It can therefore be surmised that the outcomes for different students in the same institution will vary, once again raising the question of the efficacy of any specific, or set of specific retention initiatives, on a broad segment of any community college student population. Bloom (1995) asserts that "no single process will produce a given output when inputs vary widely, as they will with a heterogeneous student population" (p. 427).

While environmental manipulation may seem a practical approach to student retention for community colleges with open-admissions, it may not be, in and of itself, an enrollment management panacea. Cohen and Brawer (1987) note that students who often spend little more than an hour or two per day in class may not appreciate nor benefit from the full effect of a campus environment. The question for community colleges investing in environmental change strategies then becomes one of cost-benefit since the relationship between campus environments and community college student persistence is not thoroughly researched. Institutions developing initiatives to improve satisfaction must take into consideration the fact that their students may quite possibly be spending more time commuting and working than attending class. It follows that effective community college satisfaction enhancing strategies should be carefully designed for the unique and ever-changing populations served.

Psychosocial approaches have produced a greater understanding of the person-environment dynamics that might impact student perceptions. Psychosocial factors, rather than affecting performance outcomes such as persistence, are seen as mediating the

antecedents to these outcomes (Napoli & Wortman, 1998). Napoli and Wortman (1998) observe that negative events that occur in school have a strong and consistently adverse effect on student outlook and attitude, noting that "of all the paths tested, negative school events had the largest direct influence on persistence" (p. 449). This finding supports research by Tinto (1975, 1987, 1993) and Pascarella and Terenzini (1991) that suggests that student/institution interactions that are perceived as less than pleasant by the student (whether in the academic, administrative, or social realm) inhibit integration and increase the likelihood of departure.

The ecological perspective, described by Huebner (1989) as atheoretical, pragmatic, and participative, examines the impact of campus environment on the student/environment transaction. Campus ecology, an outgrowth of a more general movement called social ecology, is an attempt to apply the interactionist perspective to a practical problem. Person-environment studies (P x E studies), which became possible with the development of analysis of variance techniques, led to research between 1960-1980 which documented the validity of the interactionist perspective in explaining human behavior (Ekehammar, 1974). These interactionist perspectives typically take one of three positions: personologism, situationism, or interactionism (Ekehammar, 1974). Personologism attempts to explain behavior in terms of individual attributes that cause people to behave in a fairly consistent manner in varying situations. Personologists see behavior as basically internally driven. The opposing view, situationism, sees behavior as mainly driven by the environment in which it occurs. Individuals are thus expected to behave in a fashion that is framed by situations or settings. Interactionism, the third position, suggests that a person's traits interact with situational variables to determine behavior by way of a dynamic transaction (Huebner, 1989). Huebner (1989) further

asserts that this dynamic means that positive as well as negative behaviors may be dependent upon ecological pressures. It follows that less than optimal student behaviors may not be the result of background variables, poor academic preparation, or any one of the myriad of variables found among community college students. Rather, these behaviors may be an expression of a dysfunctional student-environment relationship. Gleazer (1999) in Roueche and Roueche (1999) asserts, ". . . we are not building a college with a student. The question we ought to ask is whether the college is . . . student material" (p. iii).

By definition, the campus ecology approach is proactive and focuses on creating or redesigning campus environments to meet student needs. While this design believes in the usefulness of teaching students how to best negotiate the system, it does not see its task as one of adjusting students to meet the existing situation. Instead, institutional initiatives or lack of initiatives, both intentional or unintentional, are seen as the mediators of behavior. In the broadest sense, this approach would logically include the handling and/or manipulation of academic, social, administrative (policy/procedure/image), and facilities (aesthetic) segments of the institutional environment in order to make them more satisfying or user friendly.

Proactive interventions are based upon various theoretical models of person-environment interaction (Huebner, 1989; Walsh, 1973). Stern's (1970) "Need-Press" model, which builds primarily upon the pioneering work of Lewin, appears to provide a basis for more recent campus ecology studies. This model is based upon three primary assumptions: First, that behavior is a function of the individual interacting with the environment or B=f(P,E). Second, that a person's needs are determined by self-reported behavior. Third, that environment is defined in a collection of self-reported perceptions

(Stern, 1970). A congruent person-environment fit is seen as resulting in personal satisfaction; a poor fit is seen as resulting in discomfort or stress. This discomfort is linked to dissatisfaction, which in the case of a college student may manifest itself as dropping-out.

Campus-based efforts to intervene in person-environment interaction have apparently evolved without linkage to any specific theoretical model (Huebner, 1989). Several constructs, however, appear common to the campus ecology literature: environment, campus environment-person interaction, transaction, match/mismatch, and congruence/incongruence, although consistent definitions are lacking (Huebner, 1989). The underlying premise is that each student (or characteristic student group) will have an idiosyncratic response to an environment due to unique background characteristics and subjective perceptions that are individual (or group) specific. Given the particular heterogeneity of the community college student population, this argument would suggest that effective campus environments may require idiosyncratic institutional initiatives in order to achieve widespread student satisfaction. An alternate interpretation might be that the variety of individual variables found in the community college student population makes interventions to improve student satisfaction nebulous and ineffectual. Research by Kemerer, Baldridge, and Green (1982) supports the latter contention, noting that most retention programs involve improved advising, an emphasis on remedial programs, and some curricular changes, but that "most are ineffective" (p. 357).

Criticisms of the theory and practice of campus ecology include the following:

1. Theoretical postulates are not explicit.
2. Critical terms lack adequate operational definitions.
3. Studies are deficient in defining the physical environment and relating it to the psychological environment.
4. Most studies have not adequately researched the usefulness of campus ecology theory in predicting outcomes. (Huebner, 1989, p. 190)

The sociologically-based, campus ecology/person-environment fit theories add an interesting dimension to the traditional satisfaction/retention studies that originally focused primarily on individual student characteristics present upon initial enrollment in college. These theories, raise the question of the relative importance of institutional attempts to manipulate/change student characteristics (i.e., poor academic preparation, low self-esteem) in regard to the importance or efficacy of manipulating/changing environmental institutional variables. From this, one can further question if the many external pressures and demands upon nontraditional students by nature supersede or minimize institutional efforts at developing "staying" environments. Community colleges, as well as any university or college concerned with enrollment management and faced with a limited budget, would be well-served to consider research findings regarding the relative impact of these diverse approaches to improving student satisfaction.

Student Perceptions and Student Satisfaction

Much of the literature on student satisfaction and student perceptions is closely linked with or integral to studies on student retention. Tinto's (1987) work on student persistence as it relates to questions of congruence and integration, delves into the relationship between student characteristics and departure decisions. For example, Tinto (1987) noted that female students, particularly if married, are much more likely than males students to experience external pressures which impact their educational experience and related behaviors. Tinto (1987) also observed that the situation of older students in many ways minors that of minority students. For these groups, values and attitudes (and perhaps responsibilities) may limit their involvement in college life, fueling the perception that they are outsiders.

Astin's 1969-70 ACE-Carnegie research on student satisfaction examined the question, "are certain types of students more likely to see the environment in certain ways regardless of their actual college experience?" (Astin, 1978, p. 178). In this study, men, African American students and older students were more likely than women, Caucasian students and younger students to indicate that academic demands of the institution were too severe. (Astin, 1978). Astin's (1978) work also noted that older students and women felt a closer relationship with faculty, and that Caucasian students and women students placed more emphasis on social life than did minority students and males. Overall, this research indicated that students in general reported high satisfaction with most of their college experience, emphasizing however, that women and Caucasian students expressed slightly higher levels of satisfaction than did other target groups (Astin, 1978). This work also indicates that student perceptions of an institutional environment do vary by group.

More recent research by Cabrera, Nora, Terenzini, Pascarella, and Hagedorn (1999), focused on campus racial climate and student adjustment. The role of perceived discriminatory behavior was noted as a critical factor affecting the behavior of minority students and their social and academic integration at their institution. Experiences of racism (or perceived discrimination) have been identified as psychological and socio-cultural stressors which may impact student success regardless of academic ability (Cabrera et al., 1999). It is reasonable to assume that such stressors may impact satisfaction with a student's college environment and subsequent measures of goodness of fit.

While the diversity of students on college campuses may have increased, the timeworn melting pot theory is apparently not substantiated in an examination of student

social groups. Levine and Cureton (1998) describe a campus phenomenon dubbed organizational mitosis, a term which refers to the proliferation of divides among student groups. What may have once been a club for business students on campus, for example, is now frequently divided into multiple independent organizations, including such groupings as women business students, African American business students, gay business students, Hispanic business students, and more. As current students seem to be defining themselves more in terms of their differences rather than similarities, questions arise as to the disparities in their perceptions of campus life, personal goals, careers and relationships. The implications for college administrators trying to create more student-friendly environments become complex with the realization that initiatives designed to satisfy students may be less effective than anticipated due to the subjective perceptions of multiple groups.

The theoretical models described are the current avenues by which institutional researchers are studying the issues of satisfaction and retention. From a methodological standpoint, these models share longitudinal design, a focus on student background characteristics, and a collection of multiple measures of student interactions with their institutional environment and their external environment. Researchers disagree as to whether it may be possible for colleges to develop programmatic interventions that positively influence student satisfaction; nonetheless, an increasing number of both 4-year and 2-year institutions are implementing a variety of initiatives, many with a psycho-sociological basis, geared toward creating more student-friendly environments. The challenge of successfully addressing enrollment management at community colleges is substantial, due to the diverse student population and the paucity of data and research on 2-year college retention issues. The use of satisfaction inventories to assess student

perceptions of their campus ecosystem is a vehicle by which colleges and universities can collect strategic baseline information essential to the development of optimal retention interventions. To date, there has been little systematic evaluation of such initiatives at the community college level and inconclusive results in regard to university retention programming.

CHAPTER 3
RESEARCH METHODOLOGY

Basic procedures for completion of this study are presented in Chapter 1. This chapter expands on those procedures by discussing design, setting, data collection, and data analysis.

Design of the Study

An ex post facto design was utilized for this case study since the variables in this study were not directly manipulated by the researcher and since the research was conducted using secondary data after variations in the independent and dependent variables had already been determined. In ex poste facto research, the cause or consequences of differences already exist between or among groups of individuals (Fraenkel & Wallen, 1996). The basic approach of ex poste facto research used in this study was to begin with measures of mean group satisfaction and to look for similarities/dissimilarities of response by select student target groups to items on a satisfaction inventory. As suggested by Bogdan and Biklen (1996), this type of study constructs a picture that will take shape by a collection and examination of parts. According to Fraenkel and Wallen (1992), this approach allows for correlations to be identified, but causation cannot be fully established. This analysis utilized public-record student satisfaction data obtained from one Florida, 2-year, public community college.

Setting

This inventory analysis focused on student satisfaction data provided by a public, comprehensive community college during the 1998-99 academic year. Located in central Florida, this multi-campus institution annually enrolls approximately 15,000 degree-seeking students at four campuses and two satellite centers. Demographically, this institution enrolls 42% males, 58% females; 84% of the student body is Caucasian, 8% of the student body is African American, and 5% is Hispanic; part-time students make up 75% of the total enrollment; and the mean age is 28 years (Brevard Community College, 1998). Since student satisfaction has been closely linked in the literature with campus ecology, this particular institution during this particular time period presented a unique opportunity to examine student perception and to make reasonable inferences based upon the data.

Administrators at the focus institution were becoming increasingly concerned when 1997 data compiled for their annual Institutional Accountability Progress Report showed continuation of a 4-year trend of declining student retention. The latest figures were particularly unsettling in that for the first time, retention data for Associate in Arts (AA) degree-seeking students fell below the average for the state community college system (State of Florida community college student retention average for AA degree-seeking students for 1997: 60.98%) (Brevard Community College, 1998-99). Retention rates for Associate in Science (AS) degree seeking students continued a 3-year trend of falling below the state community college average (State of Florida community college student retention average for AS degree-seeking students for 1997: 50.09%) (Brevard Community College, 1998-99). During this same time period, GPA performance for AA

students continued to rise. Table 3-1 presents 5-year student retention data collected from the focus institution:

Table 3-1

Retention Rates, Focus Institution

	Years			
	1994	1995	1996	1997
Retention Rate-Associate in Art (AA):	74.59	62.37	60.34	58.70
Retention Rate - Associate in Science:	68.02	55.47	55.64	50.00
Retention Rate-AA: Students Needing Remedial Instruction	78.42	62.84	68.21	60.00
GPA performance, AA 2.5 & Above	70.40	71.10	76.31	77.23

(all figures are in percentages)
(all figures combine full and part-time student data)
Source: Institutional Accountability Progress Report, 1998-99

A collegewide committee was created in Spring 1998 to examine existing student satisfaction data and to develop holistic strategies for addressing the growing attrition problem. The committee consisted of faculty, administrators, professional staff, and career employees from all campuses, cochaired by a full-time faculty member and one administrator. Student input was solicited through subcommittees. With the support of the administration and through the work of the committee, the following initiatives were undertaken during the summer and fall of 1998:

1. Student schedule of classes was redesigned into a more user-friendly format.

2. Student handbook/calendar was redesigned to Student Planner format and distributed to all students enrolling for fall 1998.

3. Joint faculty/staff team was sent to National Conference for Student Retention (first-time college participation).

4. Faculty/staff team presented institutional retention data and national conference information to collegewide meetings of all faculty.

5. Handouts/reading regarding student retention were distributed on a regular basis to all faculty/student development staff at beginning of term and throughout term.

6. Faculty focus/discussion groups for retention issues were established on all campuses, led by faculty team leaders.

7. Two student advisors were sent to National Academic Advising Conference (first-time college participation).

8. Emphasis was renewed on enrolling FTIC students and students needing prep classes into college success skills class.

9. Mentor program was revitalized. All students in college success skills classes were assigned faculty or staff mentors. Full-time faculty member was named as program coordinator and given release time.

10. Title III Student Success and Retention Grant Team was initiated. Planning for student welcome centers on all campuses was announced.

11. Customer service workshop was developed for student development staff based upon materials from national advising conference.

12. Postcards were sent to all students at midterm, encouraging reenrollment in spring term.

13. Cultural diversity workshop was developed for all faculty/staff.

14. Title III began funding of faculty proposals for innovation in curriculum design. Over 20 proposals were received and approved.

15. Noel-Levitz enrollment management consultant met with faculty and staff. Recommendations were disseminated.

16. Twelve-hour mandatory professional development workshop for all advisors was held.

17. Collaborative learning workshop was held for faculty.

18. Cultural diversity, ethnocentrism, and the workplace workshop was held for faculty and staff.

19. Retention committee planned midterm academic alert systems for at-risk students.

20. Continuing professional development workshops were offered for staff: customer service, dealing with students with disabilities, and dealing with international students.

21. Academic management team made new student orientation mandatory.

22. Staff proposals for improvement of student services received approval for stipend funding.

23. Student ambassador corps was established

24. Administration was reorganized. New district president, three new student development deans assumed positions.

Administrators determined that a formal assessment of student satisfaction levels would be advantageous in planning further initiatives. The Noel-Levitz Student Satisfaction

Inventory, which was selected by the college as the instrument to assess student satisfaction levels for the 1998-99 academic year, was administered in January 1999.

Procedures for Data Collection

The college distributed 1,200 Student Satisfaction Inventories to students enrolled in Communications II classes and Prep Reading & Writing II classes, across all campuses, in spring Term 1999. These groups were chosen by the college on the basis that all degree-seeking students regardless of major must enroll in these courses and to minimize the likelihood of duplication of survey subjects. In addition, the college surveyed five sections of technical/vocational courses in order to obtain student satisfaction input from students in nonuniversity transfer programs. Students were given one week to complete and return the surveys and were instructed to complete no more than one survey instrument. The inventories were then sent to Noel-Levitz for processing. Responses were received from 516 students, although not all students answered all questionnaire items. Noel-Levitz provided the college with a comprehensive feedback report, which included demographic information on all survey participants, and multiple summaries. The institutional summary provided an item-by-item report of mean student satisfaction in a variety of instructional/noninstructional categories, a student importance rating, a performance gap rating, and a comparison of institutional means to national group means. The complete report was made available to the researcher for the purposes of this study.

Using the Student Satisfaction Inventory, students rated each item by the importance of the specific expectation as well as their satisfaction with how well that expectation was being met. A performance gap was calculated by Noel-Levitz providing the difference in the importance rating and the satisfaction rating. Special attention was

given to performance gap ratings since a large performance gap score for an item (e.g., 1.5) indicated that the institution was not meeting students' expectations, while a small or zero gap (e.g., .50) indicated that the institution was meeting students' expectations, and a negative gap score (e.g., -.25) meant that the institution was exceeding students' expectations. The inventory items addressed the following broad categories:

1. Academic Advising Effectiveness
2. Academic Services (Library, tutoring, computer lab services)
3. Admissions and Financial Aid Effectiveness
4. Campus Climate (communications, social integration)
5. Campus Support Services (orientation, special programs)
6. Concern for Individual (includes faculty and staff)
7. Instructional Effectiveness
8. Registration Effectiveness
9. Responsiveness to Diverse Populations
10. Safety and Security
11. Service Excellence
12. Student-Centeredness (students' sense of importance)

USA Group/Noel Levitz reports that the Student Satisfaction Inventory demonstrates both high reliability and validity:

> Cronbach's coefficient alpha is .97 for the set of importance scores and is .98 for the set of satisfaction scores. It also demonstrates good score reliability over time; the three week test, re-test reliability coefficient alpha is .85 for importance scores and .84 for satisfaction scores. There is also evidence to support the validity of the Student Satisfaction Inventory. Convergent validity was assessed by correlating satisfaction scores from the SSI with satisfaction scores from the College Student Satisfaction Questionnaire (CSSQ), another statistically reliable satisfaction instrument. The Pearson correlation between these two instruments ($r = .71$; $p<.00001$) is high enough to indicate that the SSI's satisfaction scores

measure the same satisfaction construct as the CSSQ's scores, and yet the correlation is low.enough to indicate that there are distinct differences between the two instruments. (USA Group, Noel-Levitz, 1997)

Procedures for Data Analysis

The researcher used the Noel-Levitz SSI Target Group Reports provided by the focus institution to identify reported mean satisfaction levels by gender, age, race/ethnicity and part time/full time enrollment status. Pearson-product moment correlation coefficients (r) were correlated to answer the study questions which focused on determining the consistency of response to inventory items by select target groups.

When two variables are found to be correlated, the implication is that the relative positions on one variable are associated with that of the other variable, but it does not necessarily mean that the changes in one variable were caused by changes in the other variable (Ary, Jacobs, & Razavieh, 1979). Data were interpreted with the caveat in mind that correlation does not necessarily indicate causation.

Using the mean target group satisfaction data, provided by the focus institution, the researcher employed the following steps for the purposes of data analysis.

1. Paired inventoried student target groups as follows:

   (a) males and females

   (b) Caucasian students and African American students

   (c) Caucasian students and Hispanic students

   (d) African American students and Hispanic students

   (e) Part time and full time students

   (f) Students age 18 and under with students ages 19-24 years

   (g) Students age 18 and under with students ages 25-34

   (h) Students age 18 and under with students ages 35-44 years

(i) Students ages 19-24 years with students ages 25-34 years

(j) Students ages 19-24 years with students ages 35-44 years

(k) Students ages 25-44 years with students ages 35-44 years

2. The group mean satisfaction level for each of 86 items on the Noel-Levitz Student Satisfaction Inventory (SSI) were entered into a data base (using an Excel spread sheet) for each target group (Appendix B).

3. A Pearson r was calculated for all target groups using SAS software.

4. Results of data from the Pearson correlation were analyzed to determine the consistency of response between the select target groups to the inventory items.

5. For the purposes of discussion, the researcher isolated the five inventory items given the highest satisfaction ratings and the five items given the lowest satisfaction ratings by each of the target groups in the study.

CHAPTER 4
SUMMARY PRESENTATION OF RESULTS

The primary purpose of this study was to determine if there was a correlation among the mean item relative satisfaction ratings of selected groups of students at a Florida community college. The study also examined the differences in expressed satisfaction levels among selected target groups in an attempt to identify areas in which the college was meeting/not meeting different environmental needs of the students. This chapter represents a consolidation of responses to 86 satisfaction indices on a standardized inventory instrument which the college administered to 516 students in the spring of 1999.

Descriptive Analysis of the Sample

As shown in Table 4-1, of those responding 58.33% were female, 41.67% were male. In terms of race/ethnicity, 66.80% were Caucasian, 10.94% were African American, and 8.01% were Hispanic with the remainder reported as "other." Full-time students made up 70.35% of the study, part-time students made up 29.65%. By age, 18.60% were 18 years or younger, 50.97% were age 19-24, 12.79% were age 25-34, 9.88% were age 35-44, and 7.75% were over 45 years of age.

Tables 4-2 to 4-14 provide the Pearson correlation (and p values) betwen paired mean item satisfaction ratings obtained from all target group samples (n = 86).

Table 4-1

Demographic Information--Student Satisfaction Inventory Respondents

Demographic	N	%
Gender		
Female	301	58.33
Male	215	41.67
Total	516	100.00
No response	43	
Ethnicity/Race		
African American	56	10.94
American Indian or Alaskan Native	9	1.76
Asian or Pacific Islander	23	4.49
Caucasian/White	342	66.80
Hispanic	41	8.01
Other race	21	4.10
Race - Prefer not to respond	20	3.91
Total	512	100.00
No response	47	
Current Enrollment Status		
Full-time	363	70.35
Part-time	153	29.65
Total	516	100.00
No response	43	
Age		
18 and under	96	18.60
19 to 24	263	50.97
25 to 34	66	12.79
35 to 44	51	9.88
45 and over	40	7.75
Total	516	100.00
No response	43	

Source: USA, Noel-Levitz Centers, 1999

Of the 516 respondents to the 86 items on the Student Satisfaction Inventory, 301 were females and 215 were males. The results of responses to the inventory items in relation to gender are reported in Table 4-2.

Table 4-2

Pearson Correlation (and p Values) Between Paired Mean Item Satisfaction Ratings Obtained from Male and Female Samples (n = 86)

Gender:	Males	Females
Males	1.000 (.00)	.8991 (.0001)
Females	(.0001)	1.000 (0.0)

Of the 515 respondents to the 86 items on the Student Satisfaction Inventory, 342 were Caucasian and 56 were African American. The results of responses to the inventory items in relation to Caucasian students and African American students are reported in Table. 4-3.

Table 4-3

Pearson Correlation (and p Values) Between Paired Mean Item Satisfaction Ratings Obtained from Caucasian Student and African American Student Samples (n = 86)

Race/Ethnicity:	Caucasians	African Americans
Caucasians	1.000 (0.0)	.6977 (.0001)
African Americans	.6997 (.0001)	1.000 (0.0)

Of the 516 respondents to the 86 items on the Student Satisfaction Inventory, 342 were Caucasian and 41 were Hispanic. The results of responses to the inventory items in relation to Caucasian students and Hispanic students are reported in Table 4-4.

Table 4-4

Pearson Correlation (and p Values) Between Paried Mean Item Satisfaction Ratings Obtained from Caucasian Student and Hispanic Student Samples (n = 86)

Race/Ethnicity:	Caucasians	Hispanics
Caucasians	1.000 (0.0)	.6994 (.0001)
Hispanics	.6994 (.0001)	1.000 (0.0)

Of the 516 respondents to the 86 item Student Satisfaction Inventory, 41 were Hispanic and 56 were African American. The results of responses to the inventory items in relation to Hispanic students and African American students are reported in Table 4-5.

Table 4-5

Pearson Correlation (and p Values) Between Paired Mean Item Satisfaction Ratings Obtained from Hispanic Student and African American Student Samples (n=86)

Race/Ethnicity	Hispanics	African Americans
Hispanics	1.000 (0.0)	.6698 (.0001)
African Americans	.6698 (.0001)	1.000 (0.0)

Of the 516 respondents to the 86 items on the Student Satisfaction Inventory, 342 were Caucasian, 56 were African American and 41 were Hispanic. The results of responses for all three racial/ethnic groups are reported in Table 4-6.

Table 4-6

Pearson Correlation (and p Values) Between Paired Mean Item Satisfaction Ratings Obtained by Racial/ethnic Group (Summary: Caucasian, African American, Hispanic) (n = 86)

Race/Ethnicity	Caucasians	African Americans	Hispanics
Caucasians	1.000 (0.0)	.6977 (.0001)	.6994 (.0001)
African Americans	-----	1.000 (0.0)	.6699 (.0001)
Hispanics	-----	-----	1.000 (0.0)

Of the 516 respondents to the 86 items on the Student Satisfaction Inventory, 363 were enrolled full-time and 153 were enrolled part-time. The results of responses to the inventory items in relation to full time and part time enrollment status are reported in Table 4-7.

Table 4-7

Pearson Correlation (and p Values) Between Paired Mean Item Satisfaction Ratings Obtained from Part-time and Full-time Students (n = 86)

Enrollment Status:	Part-time	Full-time
Part-time	1.000 (0.0)	.9091 (.0001)
Full-time	.9091 (.0001)	1.000 (0.0)

Of the 516 respondents to the 86 items on the Stuent Satisfaction Inventory, 96 stuents were ages 18 years and under and 263 students were ages 19-24 years. The results of responses to the inventory items in relation to students in these age groups are reported in Table 4-8.

Table 4-8

Pearson Correlation (and p Values) Between Paired Mean Item Satisfaction Ratings Obtained from Students Age 18 and Under and Students Ages 19-24 (n=86)

Age:	Age < 18	Age 19-24
Age < 18	1.000 (0.0)	.8429 (.0001)
Age 19-24	.8429 (.0001)	1.000 (0.0)

Of the 516 respondents to the 86 items on the Student Satisfaction Inventory, 96 students were age 18 and under and 66 students were ages 25-34 years of age. The results of responses to the inventory items in relation to students in these ages groups are reported in Table 4-9.

Table 4-9

Pearson Correlation (and p Values) Between Paired Mean Item Satisfaction Ratings Obtained from Students Age 18 and Under and Students Ages 25-34 (n = 86)

Age:	Age < 18	Age 25-34
Age < 18	1.000 (0.0)	.7489 (.0001)
Age 25-34	.7489 (.0001)	1.000 (0.0)

Of the 516 respondents to the 86 items on the Student Satisfaction Inventory, 96 students were age 18 and under, and 51 students were ages 35+. The results of responses to the inventory items in relation to students in these age groups are reported in Table 4-10.

Table 4-10

Pearson Correlation (and p Values) Between Paired Mean Item Satisfaction Ratings Obtained from Students Age 18 and Under and Students Ages 35-44 (n = 86)

Age:	Age < 18	Age 35-44
Age < 18	1.000 (0.0)	.6313 (.0001)
Age 35-44	.6313 (.0001)	1.000 (0.0)

Of the 516 respondents to the 86 items on the Student Satisfaction Inventory, 263 students were ages 19-24 and 66 students were ages 25-34. The results of responses to the inventory items in relation to students in these age groups are reported in Table 4-11.

Table 4-11

Pearson Correlation (and p Values) Betwen Paired Mean Item Satisfaction Ratings Obtained from Students Ages 19-24 and Students Ages 25-34 (n = 86)

Age:	Ages 19-24	Ages 25-34
Ages 19-24	1.000 (0.0)	.7779 (.0001)
Ages 25-34	.7779 (.0001)	1.000 (0.0)

Of the 516 respondents to the 86 items on the Student Satisfation Invewntory, 263 students were ages 19-24 and 51 students were ages 35 +. The results of responses to the inventory items in relation to these age groups are reported in Table 4-12.

Table 4-12

Pearson Correlation (and p Values) Between Paired Mean Item Satisfaction Ratings Obtained from Students Ages 19-24 and Students Ages 35 and Older (n = 86)

Age:	Ages 19-24	Ages 35 +
Ages 19-24	1.000 (0.0)	.7393 (.0001)
Ages 35+	(.0001)	(0.0)

Of the 516 respondents to the 86 items on the Student Satisfaction Inventory, 66 students were ages 25-34 and 51 students were ages 35+. The results of responses to the inventory items in relation to these age groups re reported in Table 4-13.

Table 4-13

Pearson Correlation (and p Values) Between Paired Mean Item Satisfaction Ratings Obtained from Students Ages 25-34 and Students Ages 25 and Older (n = 86)

Age:	Ages 25-34	Ages 35+
Ages 25-34	1.000 (0.0)	.8008 (.0001)
Ages 35+	.8008 (.0001	1.000 (0.0)

Of the 516 respondents to the 86 items on the Student Satisfaction Inventory, 96 students were age 18 and under, 263 students were ages 19-24, 66 students were ages 25-

34 and 51 students were over 35 years of age. The summary results of responses to the inventory items in relation to students in these age groups are reported in Table 4-14.

Table 4-14

(Summary) Pearson Correlation (and p Values) Between Paired Mean Item Satisfaction Ratings Obtained from All Age Group Samples (n= 86)

Age:	<18	19-24	25-34	35+
<18	1.000 (0.0)	.8429 (.0001)	.7489 (.0001)	.6313 (.0001)
19-24	-----	1.000 (0.0)	.7779 (.0001)	.7394 (.0001)
25-34	-----	-----	1.000 (0.0)	.8008 (.0001)
35+	-----	-----	-----	1.000 (0.0)

Student Satisfaction: Items with Highest Satisfaction Ratings/Lowest Satisfaction Ratings and Summary Items by Target Groups

Tables 4-15-4-25 report the five satisfaction items rated most highly by each target group, the five satisfaction items rated lowest by each target group, a satisfaction mean for how well the institution has met expectations, and a mean satisfaction response to the inquiry, "Would you do it (enroll) again?" Reported figures were compiled by the researcher using data from the 1999 Student Satisfaction Inventory obtained from the focus institution.

Table 4-15

Female Students

(5) Highest Satisfaction Items	Satisfaction Index (Group Means)
Well-maintained campus	5.98
Library resources adequate	5.94
Computer labs, well-maintained/accessible	5.91
Excellent quality of Instruction	5.84
Institution has good reputation in community*	5.82
Commitment to part-time student*	5.82

(5) Lowest Satisfaction Items	Satisfaction Index (Group Means)
Security is helpful	4.91
I know what's happening	4.87
Effective support services for displaced homemakers*	4.86
On-campus child-care*	4.86
Effective use of academic early warning	4.84
Financial Aid announced in timely manner	4.59

Female Summary Items	Satisfaction Index (Group Means)
How college has met expectations	4.80
Would you do it again?	5.92

Scale 0 (low satisfaction) - 7 (high satisfaction)
* indicates tied

Female students as a group had an overall mean satisfaction level of 5.35 in response to the 86 inventory items. As a group, female students responded to the inquiry "how college has met your expectations" with a 4.80 mean satisfaction indicator.

Table 4-16

Male Students

(5) Highest Satisfaction Items	Satisfaction Index (Group Means)
Well maintained campus	5.66
Convenience of scheduling	5.65
Campus is safe and secure	5.61
Knowledgeable faculty	5.59
Helpful registration staff	5.57

(5) Lowest Satisfaction Items	Satisfaction Index (Group Means)
VA is helpful	4.69
Financial Aid announced in timely manner	4.65
Security helpful*	4.63
I know what's happening*	4.63
On-campus child care	4.52
Effective support for displaced homemakers	4.45

Male Summary Items	Satisfaction Index (Group Means)
How well college has met expectations	4.54
Would you do it again?	5.50

Scale 0 (low satisfaction)- 7 (high satisfaction)
*indicates tied

Male students as a group had an overall mean satisfaction level of 5.13 in response to 86 inventory items. To the inquiry "how has college met your expectations," male students responded with a 4.54 mean satisfaction indicator.

Table 4-17

Caucasian Students

(5) Highest Satisfaction Items	Satisfaction Index (Group Means)
Well maintained campus	5.91
Excellent quality of instruction	5.87
Faculty available after class	5.82
Able to experience intellectual growth here	5.80
Knowledgeable faculty*	5.77
Campus is safe and secure*	5.77

(5) Lowest Satisfaction Items	Satisfaction Index (Group Means)
I know what's happening*	4.82
Financial Aid counselors helpful*	4.82
Security helpful	4.73
On-campus child care*	4.66
VA is helpful*	4.66
Effective support for displaced homemakers	4.65
Financial aid announced in a timely manner	4.63

Caucasian Student Summary Items	Satisfaction Index (Group Means)
How well college has met expectations	4.78
Would you do it again?	5.99

(Scale 0 (low) - 7 (high)
* = tied

Caucasian students as a group had an overall mean satisfaction level of 5.31 in response to 86 inventory items. They responded to the inquiry "how college has met your expectations" with a 4.78 mean satisfaction indicator.

Table 4-18

African American Students

(5) Highest Satisfaction Items	Satisfaction Index (Group Means)
Convenience of scheduling*	5.92
Library resources adequate*	5.92
Computer labs well-maintained/accessible	5.85
Campus is safe and secure*	5.78
Library staff helpful*	5.78
Knowledgeable faculty	5.68
Well-maintained campus	5.70

(5) Lowest Satisfaction Items	Satisfaction Index (Group Means)
Admissions staff helpful	5.0
Assessment and course placement	4.96
VA helpful	4.93
I know what's happening*	4.92
Financial Aid announced in timely manner*	4.92
Security is helpful	4.59

African American Summary Items	Satisfaction Index (Group Means)
How well college has met expectations	4.67
Would you do it again?	5.37

Scale 0 (low satisfaction) - 7 (high satisfaction)
* = tied

African American students as a group had an overall mean satisfaction level of 5.34 in response to 86 inventory items. They responded to the inquiry "how has college met your expectations" with a 4.67 mean satisfaction indicator.

Table 4-19

Hispanic Students

(5) Highest Satisfaction Items	Satisfaction Index (Group Means)
Convenience of scheduling	5.92
Academic advisor approachable*	5.84
Well-maintained campus*	5.84
Helpful registration staff	5.83
Campus is safe and secure*	5.74
Few registration conflicts*	5.74
Institution has good reputation in community	5.58

(5) Lowest Satisfaction Items	Satisfaction Index (Group Means)
Effective support services for displaced homemakers	4.83
On-campus child-care	4.72
Faculty care about student as individual	4.69
Financial Aid announced in timely manner	4.59
I know what's happening	4.51

Hispanic Student Summary Items	Satisfaction Index (Group Means)
How well college has met expectations	4.37
Would you do it again?	5.24

Scale 0 (low satisfaction) - 7 (high satisfaction)
* = tied

Hispanic students as a group had an overall mean satisfaction level of 5.24 in response to 86 inventory items. They responded to the inquiry "how college has met your expectations" with a 4.37 mean satisfaction indicator.

Table 4-20

Full-time Students

(5) Highest Satisfaction Items	Satisfaction Index (Group Means)
Well-maintained campus	5.88
Library resources adequate	5.78
Convenient scheduling	5.72
Knowledgeable faculty*	5.70
Faculty available after class*	5.70
Campus is safe and secure	5.69

(5) Lowest Satisfaction Items	Satisfaction Index (Group Means)
Effective use of academic early warning	4.82
I know what's happening	4.77
VA is helpful	4.75
Effective support services for displaced homemakers	4.70
Financial Aid is announced in a timely manner	4.62

Full-time Student Summary Items	Satisfaction Index (Group Means)
How well college has met expectations	4.69
Would you do it again?	5.67

Scale 0 (low satisfaction) - 7 (high satisfaction)
* = tied

Full-time students as a group had an overall mean satisfaction level of 5.26 in response to 86 inventory items. To the inquiry "how has college met your expectations," full-time students responded with a 4.69 mean satisfaction indicator.

Table 4-21

Part-time Students

(5) Highest Satisfaction Items	Satisfaction Index (Group Means)
Excellent quality of instruction	5.86
Library resources adequate	5.80
Well-maintained campus	5.76
Campus is safe and secure	5.75
Commitment to part-time students	5.71

(5) Lowest Satisfaction Items	Satisfaction Index (Group Means)
VA is helpful	4.70
I know what's happening	4.68
Effective suppport services for displaced homemakers	4.61
Financial Aid announced in a timely manner	4.58
On-campus childcare	4.33

Part-time Student Summary Items	Satisfaction Index (Group Means)
How well college has met expectations	4.69
Would you do it again?	5.90

Scale 0 (low satisfaction) - 7 (high satisfaction)

Part-time students as a group had an overall mean satisfaction level of 5.25 in response to 86 inventory items. In response to the inquiry "how college has met your expectations," part-time students as a group had a mean satisfaction indicator of 5.90.

Table 4-22

Students Age 18 and Younger

(5) Highest Satisfaction Items	Satisfaction Index (Group Means)
Commitment to part-time students	5.93
Library resources are adequate	5.86
Well-maintained campus	5.85
Campus is safe and secure	5.72
Few registration conflicts	5.71
(5) Lowest Satisfaction Items	**Satisfaction Index (Group Means)**
I know what's happening	4.84
Faculty care about student as individual	4.83
Security is helpful	4.74
Effective services for displaced homemakers	4.72
VA is helpful	4.68
Age < 18 Summary Items	**Satisfaction Index (Group Means)**
How well college has met expectations	4.66
Would you do it again?	5.62

Scale 0 (low satisfaction) - 7 (high satisfaction)
* = tied

Students in the age group 18 years and younger had an overall mean satisfaction rating of 5.27 in response to 86 inventory items. In response to the inquiry "how has college met your expectations," the students in this age group had a mean satisfaction indicator of 4.66.

Table 4-23

Students Ages 19-24

(5) Highest Satisfaction Items	Satisfaction Index (Group Means)
Well-maintained campus	5.77
Library resources are adequate	5.71
Campus is safe and secure	5.64
Computer labs well-maintained/accessible	5.63
Faculty available after hours	5.61

(5) Lowest Satisfaction Items	Satisfaction Index (Group Means)
Security is helpful	4.72
VA is helpful	4.64
Effective services for displaced homemakers*	4.62
On-campus childcare*	4.62
I know what's happening	4.61
Financial Aid announced in a timely manner	4.45

Age 19-24 Student Summary Items	Satisfaction Index (Group Means)
How well college has met expectations	4.46
Would you do it again?	5.45

Scale 0 (low satisfaction) - 7 (high satisfaction)
* = tied

Students in age group 19-24 had an overall mean satisfaction rating of 5.14 in response to 86 inventory items. In response to the inquiry "how has college met your expectations," the students in this age group had an overall mean satisfaction rating of 4.46.

Table 4-24

Students Ages 25-34

(5) Highest Satisfaction Items	Satisfaction Index (Group Means)
Quality of Instruction	6.15
Well-maintained campus	5.94
Computer labs well-maintained/accessible*	5.93
Knowledgeable faculty*	5.93
Commitment to part-time students	5.86
Faculty fair and unbiased	5.85

(5) Lowest Satisfaction Items	Satisfaction Index (Group Means)
Advisors helpful regarding transfer	4.93
VA is helpful	4.81
I know what's happening	4.80
Security is helpful	4.78
Counseling staff caring/helpful	4.76

Ages 25-34 Summary Items	Satisfaction Index (Group Means)
How well college has met expectations	4.97
Would you do it again?	6.23

Scale 0 (low satisfaction) - 7 (high satisfaction)
* = tied

Students ages 25-34 as a group had an overall mean satisfaction level of 5.40 in response to 86 inventory items. To the inquiry "how has college met your expectations," this group responded with a 6.23 mean satisfaction response indicator.

Table 4-25

Students Ages 35 Years and Older

(5) Highest Satisfaction Items	Satisfaction Index (Group Means)
Up-to-date facilities in labs	6.09
Excellent quality of instruction*	6.08
Enjoyable to be a student here*	6.08
Library resources adequate	6.04
Few registration conflicts*	6.00
Well-maintained campus*	6.00
Able to experience intellectual growth here*	5.98
Faculty care about students as individuals*	5.98

(5) Lowest Satisfaction Items	Satisfaction Index (Group Means)
Security responds quickly	4.84
Advisors helpful regarding transfer	4.70
Financial Aid announced in timely manner	4.49
Student Center is comfortable/inviting	4.45
On-campus childcare	4.29

Ages 35 and Older Summary Items	Satisfaction Index (Group Means)
How well college has met expectations	5.06
Would you do it again?	6.28

Scale 0 (low satisfaction) - 7 (high satisfaction)
* = tied

Students ages 35 and older as a group had an overall mean satisfaction level of 5.51 in response to the 86 inventory items. As a group these students responded to the inquiry "how well has college met your expectations" with a 5.06 mean satisfaction indicator.

Chapter 4 has presented data on the mean satisfaction levels and the mean relative satisfaction of student target groups as collected and analyzed from results of the Noel-Levitz Student Satisfaction Inventory administered at the focus institution in Spring 1999. The five highest and five lowest areas of student satisfaction by segmented groups have also been presented. Correlation coefficients have been calculated by the researcher and reported for target groups paired by gender, race/ethnicity, and age groups. These data provides the basis for the overall interpretation and summary of results that is presented in Chapter 5.

Summary Conclusions

Tables 4-26 and 4-27 summarize mean overall satisfaction responses and levels of relative satisfaction by paired target groups.

Gender

The mean group satisfaction level of female students exceeded that of male students (Table 4-26). Male and female students showed a moderate level of relative satisfaction (Table 4-27).

Race/Ethnicity

The mean group satisfaction level of African American students exceeded that of Caucasian students and Hispanic students (Table 4-26), and the mean group satisfaction level of Caucasian students also exceeded that of Hispanic students. Caucasian and African American students showed a moderately low level of relative satisfaction as did

Caucasian and Hispanic students and African American and Hispanic students (Table 4-27).

Enrollment Status

The mean group satisfaction level of full-time students exceeded that of part-time students by .01 (Table 4-26). Part-time and full-time students showed a high level of relative satisfaction (Table 4-27).

Age Groups

The mean group satisfaction level, with the exception of 19- to 24-year-olds, increased as age of the sub-group increased (Table 4-26). All age group pairs showed a moderate level of relative satisfaction except for students ages 18 and younger when paired with students 35 years and older. This correlation showed a low level of relative satisfaction responses (Table 4-27).

Table 4-26
Mean Overall Group Satisfaction by Paired Target Groups

Group	Mean Satisfaction
Gender	
Females	5.35
Males	5.13
Race/Ethnicity	
Caucasian	5.31
African American	5.34
Hispanic	5.24
Enrollment Status	
Part-time	5.25
Full-time	5.26
Age Groups	
<18	5.27
19-24	5.14
25-34	5.40
35+	5.51

Scale: 0 (low) - 7 (high); $p = .0001$ for all paired groups

Table 4-27

Relative Satisfaction: Correlation of Paired Target Groups (Highest to Lowest)

Groups	Moderately Low (r =)	Moderate (r =)	High (r =)
Males/Females		(.89)	
Caucasian/African American	(.69)		
Caucasian/Hispanic	(.69)		
African American/ Hispanic	(.66)		
Part-time/Full-time			(.90)
18 years/19-24 years		(.84)	
18 years/25-34 years		(.74)	
18 years/ 35+ years	(.63)		
19-24 years/25-34 years		(.77)	
19-24 years/35+ years		(.73)	
25-34 years/35+ years		(.80)	

Scale: r = +.30 to +.70 indicates moderately low relative satisfaction; r = +. 71 to +.89 indicates moderate relative satisfaction; r = +.90 to +1.0 indicates high relative satisfaction

CHAPTER 5
INTERPRETATION, CONCLUSIONS, DISCUSSION AND RECOMMENDATIONS

Interpretation of Results

The Overall Consistency in Student Satisfaction Responses

The purpose of this inventory analysis was to look at the relative satisfaction levels of select student target groups and to assess the consistency of response to satisfaction inventory items by these independent student groups enrolled at a community college. In order to present a picture of existing patterns, the mean satisfaction responses to 86 inventory items by 516 students were examined to determine areas of greatest and least satisfaction in regard to the institutional environment. In addition, correlation coefficients were examined to assess whether mean item relative student satisfaction and perceptions of the institutional environment differed by gender, or among ethnic/racial groups, by enrollment status, or among age groups. For the purposes of this analysis, correlation is used to refer to the degree of correspondence among mean item relative satisfaction responses by paired groups to like inventory items. Predictive value (or causation) is neither suggested nor implied; for example, the level of satisfaction scores for males does not predict or suggest the direction of the satisfaction responses by females. The use of the correlation coefficients is limited to assessing for summary purposes, the association or similarity of response among discrete groups. This information allows a practitioner to determine the efficacy of applying generalized interventions to improve satisfaction levels–or whether customized approaches are

indicated for different target groups. For discussion purposes, paired group correlation coefficients (all results were in the + range) of 0- +.29 are categorized as indicating "low consistency of response," those from +.30 - +.70 are categorized as indicating "moderately low consistency of response," those from +.71 - +.89 are categorized as "moderately high consistency of response," and those from +.90 - +.1.0 are categorized as "high consistency of response" (Ary, Jacobs & Razavieh, 1979; Brown, Amos & Mink, 1975). It should be noted that correlation coefficients should not be interpreted in the absolute sense (Ary et al., 1979). For example, a high consistency of response among paired groups does not necessarily reflect the response of one individual on this inventory or the expected responses on future inventories.

Gender and Student Satisfaction Responses

In terms of gender, female students as a group showed a mean satisfaction level of 5.35. This is higher than the collegewide mean satisfaction level (5.24), which combines responses from all target groups on all items. Overall, on a 0 (lowest) to 7 (highest) scale, the maximum female mean satisfaction rating was 5.98 and the minimum mean rating was 4.59.

As a group, female students expressed highest satisfaction with campus maintenance and facilities (library and computer labs), while their items of least satisfaction (security and "I know what's happening," childcare, services for displaced homemakers, financial aid) reference aspects of enrollment that can be characterized as related to personal comfort zone. With a student body that is predominantly female (58%), attention to these aspects of campus life could be justified as retention measures. Using the same 1-7 scale, female students as a group did indicate a relatively high positive response (5.92) to the inquiry "Would you do it (reenroll) again?" These

findings are consistent with research by Astin (1978), which noted that women students expressed relatively high satisfaction levels with their institutional environment.

Male students as a group showed a mean satisfaction of 5.13. This is lower than the collegewide mean satisfaction level (5.24), which combines responses from all target groups on all items. Overall on a 0 (lowest) to 7 (highest) scale, male students had a maximum mean satisfaction level of 5.66 and a minimum mean satisfaction level of 4.44. As a group, males expressed highest satisfaction with a cross-section of categories including campus maintenance, campus safety, faculty, and registration/scheduling items. To the inquiry, "Would you do it (reenroll) again," male students responded at a 5.50 level. Two items of lowest satisfaction concerned perceptions of/experience with financial aid and VA services, critical areas that may impact a student's ability to continue enrollment. Other items of lowest satisfaction were similar to those expressed by female students, referencing personal comfort zone issues: security, "I know what's happening," child-care, and displaced homemaker assistance. The Pearson correlation confirmed overall male/female consistency of response indicating a moderately high level of relative satisfaction ($\underline{r} = .89$). Given this consistency of response, particular attention to the noted areas of least satisfaction is warranted if satisfaction indices are to be used by the focus institution as a basis for retention initiatives and efforts to improve campus ecology.

Race/Ethnicity and Satisfaction

When considering race/ethnicity, Caucasian students as a group showed a mean satisfaction level of 5.31. This is higher than the collegewide mean satisfaction level (5.24), which combines responses from all target groups on all items. Overall on a 0

(lowest) to 7 (highest) scale, the maximum Caucasian student mean satisfaction rating was 5.91 and the minimum mean rating was 4.63.

As a group, Caucasian students expressed highest satisfaction with campus maintenance and faculty/quality of instruction (able to experience intellectual growth here), while their items of least satisfaction (financial aid/VA, services for displaced homemakers, childcare, security, and "I know what's happening") again reference "comfort zone" aspects of enrollment, rather than classroom type or educational experiences. Using the same 1-7 scale, Caucasian students as a group did indicate a relatively high positive response (5.99) to the inquiry "Would you do it (reenroll) again?"

African American students as a group reported a mean satisfaction of 5.34. This is higher than the collegewide mean satisfaction level (5.24), which combines responses from all target groups on all items. Overall on a 0 (lowest) to 7 (highest) scale, African American students had a maximum mean satisfaction level of 5.92 and a minimum mean satisfaction level of 4.59. As a group, African American students expressed highest satisfaction with a varied cross-section of categories including scheduling, library, computer labs, safety, faculty, and campus maintenance. To the inquiry, "Would you do it (reenroll) again," African American students responded at a 5.37 level. Items of least satisfaction did not focus on aspects of faculty/instruction but rather services, including admissions, assessment, financial aid/VA, security, and an expression of disconnect: "I know what's happening."

Hispanic students as a group reported a mean satisfaction of 5.24. This matches the collegewide mean satisfaction level (5.24), which combines responses from all target groups on all items. Overall on a 0 (lowest) to 7 (highest) scale, Hispanic students had a maximum mean satisfaction level of 5.92 and a minimum mean satisfaction level of 4.51.

As a group, Hispanics expressed highest satisfaction with student services (scheduling, advisors, registration staff) with campus maintenance and with the reputation of the institution. To the inquiry, "Would you do it (reenroll) again," Hispanic students responded at a 5.24 level. Two items of lowest satisfaction common across all ethnic/racial groups were financial aid and "I know what's happening." Other items of lowest satisfaction were services for displaced homemakers, child care, and "faculty care about student as individual."

Interestingly, satisfaction responses of all three ethnic/racial groups listed a "well maintained campus" as one of their top five satisfaction items. Hispanic and African American student groups both also listed "convenience of scheduling and "campus is safe and secure" as top five satisfaction items, which may reflect socio-economic factors outside of the scope of this study. At the low end of the spectrum, all three groups listed financial aid, security, and "I know what's happening" among their five lowest items of satisfaction. Based upon these items, the college in planning measures to improve the environment may want to consider (a) better ways of communicating with all students. (for Hispanic students as this may include English as a Second Language curriculum, bilingual staff/faculty, multi-cultural student groups), (b) cultural awareness/ communication sensitivity training for security officers, as well as (c) better communication avenues between the financial aid office and students.

In the area of meeting expectations, Caucasian students as a group expressed higher mean satisfaction (4.78) than did African American (4.67) or Hispanic students (4.37), and to the inquiry "Would you do it (reenroll) again," Caucasian students as a group again showed a higher positive mean response (5.99) than did African American (5.37) or Hispanic students. (5.24) These results reflect an inconsistency in that while

Caucasian students reported a lower overall mean satisfaction rating (5.31) than did African American students, (5.34) they reported the highest intent to persist. Since studies by Astin (1978) and Tinto (1987) both indicate higher degrees of overall satisfaction and social integration by Caucasian students than minority group students, further investigation is necessary to determine if these results are reflective of sample size (342 Caucasian students 56 African American students; 41 Hispanic students), of cultural differences in expressing satisfaction/dissatisfaction on a survey instrument, or other mitigating internal or external environmental factors. Relative to these findings may be research by Weissman, Bulakowski and Jumisko (1998), who noted that a 1993 study at the College of Lake County, a comprehensive community college that is demographically similar to the focus institution, found Caucasian students experienced mixed familial support for college, Hispanic students experienced strong familial support, and African American students experienced poor support. While this research may help explain satisfaction ratings expressed by Caucasian students, it does not address the mean satisfaction levels of Hispanic students, which are lower than those of the other two groups, nor the satisfaction level of African American students, which was higher than that of the other two groups. Hurtado, Carter, and Spuler (1996) observed that in addition to strong familial support, the maintenance of social relationships is a critical factor in adjustment for Hispanic students. Given that Hispanic students make up only 5% of the student body at the focus institution, alienation may be a factor contributing to overall low satisfaction ratings. The fact that Hispanic students listed "I know what's happening" as their area of least satisfaction supports this hypothesis.

In terms of consistency of response, Caucasian students and African American students showed a moderately low level of relative satisfaction ($r = .69$) as did Caucasian

students and Hispanic students (r = .69) and African American and Hispanic students (r = .66). While one might reasonable expect low consistency of response between Caucasian students and "minority" students, it is interesting to note similarly low consistency of relative satisfaction responses between African American students and Hispanic students. Based upon these results, it appears that racial/ethnic background did impact the way in which students at the focus institution perceived their environment. These findings also suggest that "generic" retention initiatives would not necessarily be effective for all student groups. Moreover, these results indicate that environmental interventions targeting "minorities" may require group specificity. The perceptions of African American and Hispanic students as demonstrated by a moderately low level of consistency of response are unique enough to call for closer study and perhaps customized responses if the goal is raising group satisfaction.

Enrollment Status and Satisfaction

Part-time students as a group expressed a mean satisfaction level (5.25) very close to that of full-time students (5.26). Specific items of highest/lowest satisfaction for these particular subgroups are of interest, since the part-time/full-time cohorts together represent all enrolled students. The top five satisfaction items for both groups included (a) well-maintained campus, (b) adequate library resources, and (c) safe and secure campus. Part-time students acknowledged "excellent quality of instruction" as a high satisfaction item (5.86), while full-time students noted a similar area, "knowledgeable faculty," as a high satisfaction item (5.70). Interestingly, both full- and part-time students rate "how well college met expectations" at the same level: 4.69 on a 0 (low) - 7 (high) scale. To the inquiry, "would you do it (reenroll) again," part-time students

responded with a satisfaction mean of 5.90, which exceeded that of full-time students (5.67).

In terms of items of least satisfaction, part-time and full-time students shared four of five categories: "I know what's happening," VA services, services for displaced homemakers, and financial aid. The item of least satisfaction for part-time students was child-care (4.33), which may be directly related to some of the reasons for part-time enrollment. In terms of consistency of response, the Pearson correlation revealed a high level of relative satisfaction ($r = .90$) for part-time and full-time students. These findings are in fact inconsistent with research by Tinto (1987) that indicated that part-time enrollment, which is frequently paired with outside employment or family responsibilities, limits institutional bonding, student satisfaction, and success. It should be noted that Tinto's work focused on university populations and a norm of full-time enrollment. Whereas part-time students made up 75% of the total enrollment at the focus institution, the Student Satisfaction Inventory reflected responses by 70% full-time and 30% part-time students. As such, these results cannot be considered conclusive.

Age Groups and Satisfaction

When examining age groups, the youngest students, those in the subgroup 18 years and under had a mean satisfaction level of 5.27, with a maximum of 5.93 and a minimum rating of 4.68; students ages 19-24 reported a mean satisfaction level of 5.14, with a maximum of 5.77 and a minimum of 4.45; students ages 25-34 had a mean satisfaction level of 5.40, with a maximum of 6.15 and a minimum of 4.76; and students ages 35 and older reported the highest subgroup mean satisfaction level, 5.51, with a maximum of 6.09 and a minimum of 4.29. Just as mean satisfaction rose with student age, with the exception of 19-24 year olds, responses to how well the college had met

expectations rose with age, with the exception of 19-24 year olds (<18: 4.66; 19-24: 4.46; 25-34: 4.97; 35 +: 5.06). To the inquiry, "would you do it (reenroll) again," the same pattern was noted (<18: 5.62; 19-24: 5.45; 25-34: 6.23; 35+: 6.28). The low satisfaction ratings by those in age group 19-24 present an interesting departure from the general rise in satisfaction level with age and certainly present an avenue for further study.

As a group, students 18 years and younger reported highest satisfaction with "commitment to part-time students" (perhaps a reflection of the fact that the focus institution enrolls more early admission and dual enrollment high school students than any other community college in the state) (Institutional Accountability Progress Report, 1998) and library resources, while expressing least satisfaction with "I know what's happening" and faculty's concern for the individual, perhaps also indicative of a large population that is still of traditional high school age. Students ages 19-24 reported highest satisfaction with campus maintenance and also with the library and low satisfaction with financial aid/VA, childcare, displaced homemaker services, and "I know what's happening." As a group, students ages 25-34 listed quality of instruction and campus maintenance as their areas of greatest satisfaction and reported least satisfaction with items related to good communication: advisor assistance, VA services, "I know what's happening," security, and caring counselors. The oldest group of students (35+) indicated the greatest satisfaction across the board, listing lab facilities, faculty/instruction, library, registration, and campus maintenance among their five highest satisfaction items. Low satisfaction items included helpfulness of security and advisors, financial aid, a comfortable student center, and on-site childcare.

While data provided by the focus institution noted that only 48.2% of students ages 35 and over reenrolled in subsequent terms despite expressing high satisfaction levels, both Tinto (1987) and Tucker (1999) have observed that the tendency to equate departure to failure, either on the part of the student or due to some institutional short-coming, may be erroneous since students often leave school for positive reasons. This is particularly true of older students who tend to leave when their self-defined goals have been met or who may leave for external circumstances outside their control (White, 1990).

In terms of consistency of response, students 18 years and younger and those 19-24 years showed a moderate level of relative satisfaction ($\underline{r}$ = .84) as did students 18 years and younger and those 25-34 years ($\underline{r}$ = .74), students 19-24 years of age and students 25-34 years ($\underline{r}$ =.77), students 19-24 years of age and students 35 + years ($\underline{r}$ = .73), and students 25-34 years and students 35+ years ($\underline{r}$ =.80). In contrast, those students with the widest age gap, those 18 years and under and students ages 35+ showed a moderately low level of relative satisfaction ($\underline{r}$ =.63)

Discussion and Recommendations

The following discussion will attempt to place the results of this study and its relationship to the research questions in proper perspective. The commentary will focus on the value of this research by discussing the results of this study in regard to what has been already learned through the review of related literature and by presenting recommendations for future action.

Student satisfaction studies are self-examinations that allow educational institutions to assess the health of their environment through the eyes of their "customers." The focus institution, as well as many other schools, are employing student

surveys in an attempt to identify environmental strengths and weaknesses which may impact student retention and success. In order to make the most effective use of satisfaction inventory results in designing initiatives to improve the campus ecology, it is necessary to carefully assess what we are looking for, and looking at, especially when dealing with summary results drawn from a diverse population. By examining the relative satisfaction responses of select target groups to a satisfaction inventory, the researcher looked beyond defining "students" as a homogenous groups of individuals enrolled in classes during a given semester. Rather than making assumptions about student satisfaction with the campus environment based upon the overall mean ratings for inventory items reported by "all" students, or by looking only at the mean ratings for target groups, research also examined the consistency of response to like inventory items by various paired groups. The results of this research indicated that while some common threads of high student satisfaction (well-maintained campus; adequate library resources) and low satisfaction (financial aid) were apparent, there were notable differences in consistency of response/relative satisfaction among groups.

The noted differences in relative satisfaction and target group perceptions has broad implications for the focus institution in regard to efforts to improve the campus environment. Based upon the results of this study, it is clear that to define "students" as a homogenous group and to design retention/satisfaction initiatives without thought to the differences in group perceptions would not address the needs of all enrollees. While relative group satisfaction and consistency of response was "moderate" ($\underline{r}$ = +.71 to +.89) for six of eleven groups studied and "high" for one group ($\underline{r}$ = +.90 to +1.0) examined, it was "moderately low" ($\underline{r}$ = +.30 to +.70) for four of the eleven groups. The low correlation in relative satisfaction between African American students and Hispanic

students (r = +.66) is an indication that blanket initiatives to "improve the satisfaction of minority groups" would not be as effective as those designed to specifically address the needs of African American students and Hispanic students as identified by further investigation. Based upon these results and also the moderately low correlation in relative satisfaction between Caucasian students and African American students (r = .69), and Caucasian students and Hispanic students (r = .69), it could be hypothesized that customizing satisfaction improving initiatives to specific racial/ethnic groups would be the most effective approach. The moderately low correlation in relative satisfaction between students 18 years and younger and those over age 35 (r = .63) also suggests a need for group specific interventions. This concept is supported by Stern's "Need-Press" model which argues that (a) behavior is a function of the individual interacting with the environment, (b) that a person's needs are determined by self-reported behavior, and (c) that the environment is defined in a collection of self-reported perceptions. (Stern, 1970) This model suggests that students will have an idiosyncratic response to an environment due to unique background characteristics and subjective perceptions, an observation borne out in the results of this study.

The identification of most and least satisfied student groups and also relative levels of satisfaction among target groups, raises the question of how best to intervene to improve the campus environment. The concept of psychological intervention as it relates to developing a campus community supports three perspectives: (a) to intervene with the setting alone, (b) to intervene primarily with the persons involved, or (c) to intervene with both the persons involved and the setting (Huebner, 1979). In the first perspective the primary goal can be best described as actions taken to eliminate stress-producing characteristics or to develop climates which potentiate optimal student development.

Examples include the creation of user-friendly catalogs and handbooks, clearly marked buildings, convenient scheduling of classes and extended hours in service offices. The second perspective suggests that an institution may have to implement idiosyncratic environmental responses to achieve greater satisfaction and improved persistence among select target groups. These types of interventions are characterized by initiatives such as special tutors and student centers for minority groups, the assignment of mentors to students identified as "at risk," and institutional funding for various support groups. The third perspective strives to integrate the first two approaches to achieve good person-environment fit. An intervention of this nature would be customer-service training for collegewide staff who are involved in a telecounseling initiative to contact students with poor class attendance. Early research by Ekehammer (1974) suggests that more behaviors are explained through the person/environment dynamic than through non-interactionist perspectives. Research by Kemerer, Baldridge, and Green 1982) supports the integrated perspective, noting that due to the variety of individual variables present when dealing with a heterogeneous population any singular intervention to improve overall student satisfaction would be ineffectual.

Campus ecologists, adhering to the interactionist philosophy, would argue that it is the campus environment, not the individual student that requires primary attention when addressing satisfaction. The campus ecology approach deserves strong consideration as the philosophical basis for addressing issues of student satisfaction and the related issue of student retention since research by Tinto (1993), Napoli and Wortman (1996) and Pascarella and Terenzini (1991), shows a lack of consistency when using psychological profiles in attempts to correlate personality inventories with direct measures of academic success and/or persistence. As Tucker (1999) observes

> Addressing the specific problems faced by students who are in a racial minority, or students who are returning to school from the world of work, or students who commute, or students who are shy, or students who were not encouraged by parents cannot be done on a point-by point basis in an institution with any degree of efficiency or humanity. . . . It is more a question of establishing base-line conditions of efficiency, counseling, and welcome, which set the tone and provide for a variety of occasions. (pp. 167-168)

The multiplicity of issues community college students carry with them in a wide variety of combinations, makes identifying specific needs and effective solutions extremely complex. Addressing the elusive dynamics inherent in enrollment management, especially for community colleges, will require continued monitoring and examination of both individual and institutional factors related to creating a staying-environment. Results of this study suggest that a community college faced with serving a diverse population can take an initial step toward improving overall student satisfaction by exploring perceptions of the institution held by various student groups. Identifying categorical elements integral to persistence by assessing relative student satisfaction, and responding to expressed needs with appropriate interventions and initiatives is an enrollment management option which is well-supported in the literature and in the data analyzed for this study.

Recommendations

Based upon the results of this study, the following recommendations are made on behalf of the focus institution and to enlighten community college professionals interested in student satisfaction as it relates to enrollment management.

1. Because of the heterogeneity of the community college, all professional staff should become aware of the diverse groups represented on their campus and participate in diversity training which includes, but is not limited to, issues of age, gender, ethnicity/race, and physical abilities.

2. Student satisfaction surveys should be administered annually to representative target groups at the college to determine and track student satisfaction levels.

3. Measures of relative group satisfaction should be assessed from satisfaction survey data in order to design appropriate environmental initiatives.

4. Satisfaction initiatives should be two-pronged: Those interventions selected to improve the overall campus environment; those interventions specifically designed to meet the needs of student subgroups as identified from satisfaction inventories.

5. Policies concerning student satisfaction/enrollment management should be reviewed to ensure a holistic approach with top-down administrative support.

6. The low mean satisfaction ratings by Hispanic students as well as the low relative satisfaction expressed by Hispanic students indicates a need for the focus institution to review support services specific to this group.

7. The low satisfaction ratings by students in age group 19 to 24 warrants further investigation and analysis.

Topics for Further Study

1. A study should be conducted to identify the affiliation needs and specific environmental factors which are integral to student satisfaction by segmented student groups at the community college.

2. A longitudinal study should be conducted to identify the relationship between specific environmental interventions and student satisfaction at the community college.

3. A study should be conducted to determine the relationship between student satisfaction and academic achievement at the community college.

4. A longitudinal study should be conducted to determine if the consistent implementation of initiatives designed to improve campus environmental factors over an

extended period of time, can positively impact student persistence at the community college.

5. A study should be conducted to further explore the relationship between academic advising and student satisfaction in order to assess the role of the advisor in defining the campus environment and to examine the impact of advisement on student persistence.

6. A study should be conducted to explore the relationship between student satisfaction and subsequent reenrollment at or graduation from the community college.

7. A study should be conducted to explore the relationship between group levels of satisfaction, expressed intent to persist and actual retention.

APPENDIX A
NOEL-LEVITZ STUDENT SATISFACTION INVENTORY

Each item below describes an expectation about your experiences on this campus. On the *left*, tell us how important it is for your institution to meet this expectation. On the *right* tell us how satisfied you are that your institution has met this expectation.

Importance to me
1. Not important at all
2. Not very important
3. Somewhat unimportant
4. Neutral
5. Somewhat important
6. Important
7. Very important

My level of satisfaction
1. Not satisfied at all
2. Not very satisfied
3. Somewhat dissatisfied
4. Neutral
5. Somewhat satisfied
6. Satisfied
7. Very satisfied

1. Most students feel a sense of belonging here.
2. Faculty care about me as an individual.
3. The quality of instruction in the vocational/technical programs is excellent.
4. Security staff are helpful.
5. The personnel involved in registration are helpful.
6. My academic advisor is approachable.
7. Adequate financial aid is available for most students.
8. Classes are scheduled at times that are convenient for me.
9. Internships or practical experiences are provided in my degree/certificate program.
10. Child care facilities are available on campus.
11. Security staff respond quickly in emergencies.
12. My academic advisor helps me set goals to work toward.
13. Financial aid awards are announced to students in time to be helpful in college planning.
14. Library resources and services are adequate.
15. I am able to register for classes I need with few conflicts.
16. The college shows concern for students as individuals.
17. Personnel in the Veterans' Services program are helpful.
18. The quality of instruction I receive in most of my classes is excellent.
19. This campus provides effective support services for displaced homemakers.
20. Financial aid counselors are helpful.
21. There are a sufficient number of study areas on campus.
22. People on this campus respect and are supportive of each other.
23. Faculty are understanding of students' unique life circumstances
24. Parking lots are well-lighted and secure.

25. My academic advisor is concerned about my success as an individual.
26. Library staff are helpful and approachable.
27. The campus staff are caring and helpful.
28. It is an enjoyable experience to be a student on this campus.
29. Faculty are fair and unbiased in their treatment of individual students.
30. The career services office provides students with the help they need to get a job.
31. The campus is safe and secure for al students.
32. My academic advisor is knowledgeable about my program requirements.
33. Admissions counselors accurately portray the campus in their recruiting practices.
34. Computer labs are adequate and accessible.
35. Policies and procedures regarding registration and course selection are clear and well-publicized.
36. Students are made to feel welcome on this campus.
37. Faculty take into consideration student differences as they teach a course.
38. The student center is a comfortable place for students to spend their leisure time.
39. The amount of student parking space on campus is adequate.
40. My academic advisor is knowledgeable about the transfer requirements of other schools.
41. Admissions staff are knowledgeable.
42. The equipment in the lab facilities is kept up to date.
43. Class change (drop/add) policies are reasonable.
44. I generally know what's happening on campus.
45. This institution has a good reputation within the community.
46. Faculty provide timely feedback about student progress in a course.
47. There are adequate services to help me decide upon a career.
48. Counseling staff care about students as individuals.
49. Admissions counselors respond to prospective students' unique needs and requests.
50. Tutoring services are readily available.
51. There are convenient ways of paying my school bill.
52. This school does whatever it can to help me reach my educational goals.
53. The assessment and course placement procedures are reasonable.
54. Faculty are interested in my academic problems.
55. Academic support services adequately meet the needs of students.
56. The business office is open during hours which are convenient for most students.
57. Administrators are approachable to students.
58. Nearly all of the faculty are knowledgeable in their fields.
59. New student orientation services help students adjust to college.
60. Billing policies are reasonable.
61. Faculty are usually available after class and during office hours.
62. Bookstore staff are helpful.
63. I seldom get the "run-around" when seeking information on this campus.
64. Nearly all classes deal with practical experiences and applications.
65. Students are notified early in the term if they are doing poorly in a class.
66. Program requirements are clear and reasonable.
67. Channels for expressing student complaints are readily available.
68. On the whole, the campus is well-maintained.
69. There is a good variety of courses provided on this campus.

70. I am able to experience intellectual growth here.

(Items 71-80 not available)

(For the following questions, only satisfaction is rated.)
How satisfied are you that this campus demonstrates a commitment to meeting the needs of:
81. Part-time students?
82. Evening students/
83. Older, returning learners?
84. Under-represented populations?
85. Commuters?
86. Students with disabilities?

(For the following questions, only importance is rated)
87. Cost
88. Financial aid
89. Academic reputation
90. Size of institution
91. Opportunity to play sports
92. Recommendations from family/friends
93. Geographic setting
94. Campus appearance
95. Personalized attention prior to enrollment

Choose the one response that best applies to you and darken the corresponding oval for each of the questions below.

96. So far, how has your college experience met your expectations?
    (1) Much worse than I expected
    (2) Quite a bit worse than I expected
    (4) Worse than I expected
    (5) About what I expected
    (6) Better than I expected
    (7) Quite a bit better than I expected
    (8) Much better than I expected.

97. Rate your overall satisfaction with your experience here thus far.
    (1) Not satisfied at all
    (2) Not very satisfied
    (3) Somewhat dissatisfied
    (4) Neutral
    (5) Somewhat satisfied
    (6) Satisfied
    (7) Very satisfied.

98. All in all, if you had to do it over again, would you enroll here?
    (1) Definitely not
    (2) Probably not
    (3) Maybe not
    (4) I don't know
    (5) Maybe yes
    (6) Probably yes
    (7) Definitely yes

Choose the one response that best describes you and darken the corresponding oval for each of the items below.

99. Gender:
    (1) Female
    (2) Male

100. Age
    (1) 18 and under
    (2) 19 to 24
    (3) 25 to 34
    (4) 35 to 44
    (5) 45 and over

101. Ethnicity/Race:
    (1) African American
    (2) American Indian or Alaskan Native
    (3) Asian or Pacific Islander
    (4) Caucasian/White
    (5) Hispanic
    (6) Other
    (7) Prefer not to respond

102. Current Enrollment Status:
    (1) Day
    (2) Evening
    (3) Weekend

103. Current Class Load:
    (1) Full-time
    (2) Part-time

104. Class Level:
    (Years in attendance at this college)
    (1) 1 or less
    (2) 2
    (3) 3
    (4) 4 or more

105. Current GPA:
   (1) No credits earned
   (2) 1.99 or below
   (3) 2.0 - 2.49
   (4) 2.5 - 2.99
   (5) 3.0 - 3.49
   (6) 3.5 or above

106. Educational Goal:
   (1) Associate degree
   (2) Vocational/technical program
   (3) Transfer to another institution
   (4) Certification (initial or renewal)
   (5) Self-improvement/pleasure
   (6) Job-related training
   (7) Other

107. Employment:
   (1) Full-time off campus
   (2) Part-time off campus
   (3) Full-time on campus
   (4) Part-time on campus
   (5) Not employed

108. Current Residence:
   (1) Residence hall
   (2) Own house
   (3) Rent room or apartment off campus
   (4) Parent's home
   (5) Other

109. Residence Classification:
   (1) In-state
   (2) Out-of-state
   (3) International (not U.S. citizen)

110. Disabilities:
   Physical disability or a diagnosed learning disability?
   (1) Yes
   (2) No

111. When I entered this institution, it was my:
   (1) 1st choice
   (2) 2nd choice
   (3) 3rd choice or lower

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APPENDIX B
INSTITUTIONAL SUMMARY:
MEAN SATISFACTION LEVELS

		MALES	FEMALES	CAUCASIAN	AFR-AMER	HISPANIC	P/T	F/T	18/UNDER	19-24	25-34	35-44
1.	Most students feel a sense of belonging here.	5.03	5.37	5.26	5.15	5.53	5.30	5.20	5.25	5.02	5.46	5.65
2.	Faculty care about me as an individual.	5.12	5.48	5.38	5.25	5.28	5.41	5.30	5.46	5.04	5.62	5.98
3.	The quality of instruction in the vocational/technical programs is excellent.	5.17	5.47	5.43	5.07	5.43	5.44	5.30	5.49	5.08	5.60	5.78
4.	Security staff are helpful.	4.71	5.08	4.92	4.59	5.11	4.98	4.90	4.74	4.79	5.11	5.53
5.	The personnel involved in registration are helpful.	5.46	5.68	5.63	5.69	5.83	5.69	5.56	5.73	5.44	5.54	5.85
6.	My academic advisor is approachable.	5.47	5.47	5.44	5.67	5.84	5.37	5.51	5.50	5.41	5.40	5.62
7.	Adequate financial aid is available for most students.	4.95	5.10	4.99	5.48	5.34	4.81	5.11	5.10	4.93	5.31	5.23
8.	Classes are scheduled at times that are convenient for me.	5.65	5.83	5.81	5.92	5.92	5.85	5.72	5.80	5.67	5.68	5.92
9.	Internships or practical experiences are provided in my degree/certificate program.	4.79	5.16	5.00	5.02	4.88	4.85	5.05	5.03	4.92	5.00	5.00
10.	Child care facilities are available on campus.	4.52	4.86	4.66	5.15	4.72	4.33	4.85	4.94	4.62	4.98	4.29
11.	Security staff respond quickly in emergencies.	4.63	4.91	4.73	5.07	4.75	4.68	4.83	4.87	4.72	4.78	4.84
12.	My academic advisor helps me set goals to work toward.	4.85	4.92	4.88	5.43	5.34	4.87	4.90	5.23	4.78	4.93	4.70
13.	Financial aid awards are announced to students in time to be helpful in college planning.	4.65	4.59	4.63	4.92	4.59	4.58	4.62	4.78	4.45	5.33	4.49
14.	Library resources and services are adequate.	5.57	5.94	5.80	5.92	5.62	5.80	5.78	5.86	5.71	5.78	6.04

	MALES	FEMALES	CAUCASIAN	AFR-AMER	HISPANIC	P/T	F/T	18/UNDER	19-24	25-34	35-44
15. I am able to register for classes I need with few conflicts.	5.51	5.72	5.70	5.64	5.74	5.64	5.64	5.71	5.49	5.67	6.00
16. The college shows concern for students as individuals.	4.93	5.23	5.19	5.23	5.00	5.14	5.09	5.25	4.88	5.23	5.43
17. Personnel in the Veterans' Services program are helpful.	4.69	4.78	4.66	4.93	4.90	4.70	4.75	4.68	4.64	4.81	5.15
18. The quality of instruction I receive in most of my classes is excellent.	5.57	5.84	5.87	5.47	5.39	5.86	5.67	5.80	5.48	6.15	6.08
19. This campus provides effective support services for displaced homemakers.	4.45	4.86	4.65	4.85	4.83	4.61	4.70	4.72	4.62	4.97	4.93
20. Financial aid councelors are helpful.	4.77	4.95	4.82	5.29	5.31	4.85	4.88	5.13	4.75	5.16	4.88
21. There are a sufficient number of study areas on campus.	5.23	5.59	5.50	5.65	5.37	5.51	5.41	5.45	5.39	5.57	5.73
22. People on this campus respect and are supportive of each other.	5.15	5.31	5.36	5.28	5.21	5.33	5.21	5.20	5.09	5.44	5.80
23. Faculty are understandig of student's unique life circumstances.	4.99	5.10	5.18	4.92	4.87	5.15	5.01	4.83	4.84	5.51	5.74
24. Parking lots are well-lighted and secure.	5.15	5.29	5.33	5.37	5.16	5.31	5.20	4.98	5.19	5.40	5.60
25. My academic advisor is concerned about my success as an individual.	4.97	5.02	4.99	5.57	5.00	4.95	5.02	4.98	4.95	5.13	5.02
26. Library staff are helpful and approachable.	5.54	5.78	5.76	5.78	5.39	5.66	5.69	5.53	5.59	5.77	6.21
27. The campus staff are caring and helpful.	5.31	5.55	5.50	5.63	5.26	5.50	5.44	5.41	5.33	5.55	5.69
28. It is an ejoyable experience to be a student on this campus.	5.32	5.64	5.63	5.42	5.33	5.62	5.46	5.32	5.32	5.68	6.08
29. Faculty are fair and unbiased in their treatment of individual students.	5.24	5.58	5.60	5.38	5.31	5.59	5.38	5.35	5.22	5.85	5.82

	MALES	FEMALES	CAUCASIAN	AFR-AMER	HISPANIC	P/T	F/T	18/UNDER	19-24	25-34	35-44
30. The career services office provides students with the help they need to get a job.	4.95	5.04	5.09	5.11	5.09	4.79	5.07	5.10	4.96	5.00	4.90
31. The campus is safe and secure for all students.	5.61	5.77	5.77	5.77	5.74	5.75	5.69	5.72	5.64	5.66	5.86
32. My academic advisor is knowledgeable about my program requirements.	5.19	5.31	5.25	5.43	5.58	5.15	5.30	5.33	5.20	5.04	5.50
33. Admissions counselors accurately portray the campus in their recruitig practices.	4.84	5.19	5.11	5.04	4.89	5.01	5.07	5.10	4.96	5.09	5.49
34. Computer labs are adequate and accessible.	5.44	5.91	5.78	5.85	5.49	5.68	5.71	5.60	5.63	5.93	5.95
35. Policies and procedures regarding registration andcourse selection are clear and well-publicized.	5.57	5.63	5.71	5.57	5.34	5.69	5.57	5.63	5.48	5.79	5.84
36. Students are made to feel welcome on this campus.	5.45	5.72	5.69	5.47	5.46	5.61	5.61	5.54	5.47	5.84	5.94
37. Faculty take into consideration studet differences as they teach a course.	5.22	5.31	5.38	5.26	5.08	5.35	5.24	5.29	5.04	5.42	5.78
38. The student center is a comfortable place for students to spend their leisure time.	4.78	5.03	4.91	5.36	5.00	4.74	5.00	4.95	5.03	4.79	4.45
39. The amount of student parking space on campus is adequate.	5.00	5.14	5.04	5.46	5.24	5.19	5.04	5.17	4.94	5.08	5.49
40. My academic advisor is knowledgeable about the transfer requirements of other schools.	5.14	4.98	5.02	5.29	5.34	4.92	5.10	4.99	5.07	5.10	4.89
41. Admissions staff are knowledgeable.	5.36	5.55	5.59	5.33	5.46	5.68	5.39	5.40	5.44	5.52	5.54

	MALES	FEMALES	CAUCASIAN	AFR-AMER	HISPANIC	P/T	F/T	18/UNDER	19-24	25-34	35-44
42. The equipment in the lab facilities is kept up to date.	5.48	5.73	5.69	5.52	5.50	5.58	5.64	5.51	5.58	5.68	6.09
43. Class change (drop/add) policies are reasonable.	5.32	5.43	5.49	5.31	5.32	5.32	5.42	5.38	5.24	5.56	5.84
44. I generally know what's happenig on campus.	4.57	4.87	4.82	4.92	4.51	4.68	4.77	4.84	4.61	4.80	5.06
45. This institution has good reputation within the community.	5.46	5.82	5.77	5.62	5.63	5.66	5.68	5.75	5.52	5.79	5.76
46. Faculty provide timely feed back about student progress in a course.	5.17	5.37	5.40	5.13	5.29	5.37	5.25	5.07	5.04	5.74	5.82
47. There are adequate services to help me decide upon a career.	4.94	5.18	5.16	5.22	5.14	5.04	5.10	5.22	4.91	5.23	5.17
48. Counseling staff care about students as individuals.	4.99	5.16	5.14	5.32	5.08	4.91	5.16	5.30	5.02	4.76	5.10
49. Admissions counselors respond to prospective students' unique needs and requests.	5.06	5.25	5.22	5.00	5.39	5.23	5.14	5.29	5.10	5.15	5.19
50. Tutoring services are readily available.	5.04	5.33	5.16	5.61	5.34	5.19	5.20	5.16	5.22	5.10	5.57
51. There are convenient ways of paying my school bill.	5.36	5.20	5.31	5.44	5.41	5.21	5.30	5.11	5.16	5.61	5.85
52 This school does whatever it can to help me reach my educational goals.	5.09	5.17	5.18	5.15	5.03	5.23	5.10	5.12	4.98	5.23	5.45
53. The assessment and course placement procedures are reasonable.	5.18	5.24	5.36	4.96	5.08	5.27	5.20	5.18	5.08	5.37	5.51
54. Faculty are interested in my academic problems.	5.05	5.17	5.25	5.06	4.69	5.21	5.08	4.99	4.88	5.35	5.77
55. Academic support services adequately meet the needs of students.	5.06	5.23	5.18	5.42	5.14	5.28	5.11	4.99	5.08	5.37	5.49

	MALES	FEMALES	CAUCASIAN	AFR-AMER	HISPANIC	P/T	F/T	18/UNDER	19-24	25-34	35-44
56. The business office is open during hours that are convenient for most students.	5.34	5.51	5.45	5.63	5.42	5.47	5.42	5.30	5.31	5.54	5.82
57. Administrators are approachable to students.	5.23	5.27	5.29	5.37	5.15	5.25	5.25	4.96	5.21	5.51	5.54
58. Nearly all of the faculty are knowledgeable in their fields.	5.59	5.76	5.77	5.68	5.53	5.67	5.70	5.57	5.61	5.93	5.91
59. New student orientation services help students adjust to college.	4.83	5.20	5.09	5.19	5.19	5.05	5.03	4.84	5.06	5.05	5.19
60. Billing policies are reasonable.	5.11	5.28	5.29	5.41	5.22	5.19	5.22	4.88	5.08	5.46	5.73
61. Faculty are usually available after class and during office hours.	5.57	5.77	5.82	5.43	5.46	5.68	5.70	5.60	5.61	5.62	6.14
62. Bookstore staff are helpful.	5.42	5.43	5.50	5.43	5.53	5.38	5.45	5.39	5.39	5.39	5.58
63. I seldom get the " run-around " when seeking information on this campus.	5.10	5.12	5.21	5.13	5.03	5.31	5.04	4.93	4.95	5.37	5.61
64. Nearly all classes deal with practical experiences and applications.	5.32	5.35	5.51	5.32	4.95	5.27	5.36	5.24	5.24	5.42	5.60
65. Students are notified early in the term if they are doing poorly in a class.	4.95	4.84	4.89	5.34	5.31	5.05	4.82	4.61	4.77	5.15	5.41
66. Program requirements are clear and reasonable.	5.26	5.57	5.57	5.39	5.33	5.43	5.44	5.42	5.30	5.62	5.73
67. Channels for expressing student complaints are readily available.	4.79	4.94	4.90	5.02	4.94	5.01	4.83	4.94	4.78	5.12	4.95
68. On the whole the campus is well maintained.	5.66	5.98	5.91	5.70	5.84	5.76	5.88	5.85	5.77	5.94	6.00
69. There is a good variety of courses provided on this campus.	5.47	5.55	5.64	5.52	5.26	5.37	5.57	5.54	5.33	5.73	5.66
70. I am able to experience intellectual growth here.	5.43	5.78	5.80	5.55	5.36	5.67	5.63	5.58	5.39	6.11	5.98

	MALES	FEMALES	CAUCASIAN	AFR-AMER	HISPANIC	P/T	F/T	18/UNDER	19-24	25-34	35-44
71. Campus item	4.49	5.03	4.85	4.97	4.93	4.83	4.80	4.76	4.83	4.83	4.68
72. Campus item	4.87	5.09	4.99	5.55	4.73	4.90	5.04	5.03	4.99	5.27	4.77
73. Campus item	5.30	5.63	5.61	5.61	4.87	5.47	5.50	5.51	5.37	5.63	5.52
74. Campus item	5.39	5.60	5.57	5.72	5.23	5.55	5.49	5.48	5.49	5.47	5.60
75. Campus Item	5.19	5.57	5.49	5.56	5.37	5.56	5.36	5.48	5.27	5.59	5.55
76. Campus item	4.99	5.36	5.28	5.26	5.29	5.02	5.23	5.08	5.19	5.35	5.29
77. Campus item	4.67	4.86	4.68	5.09	5.18	4.48	4.88	4.91	4.74	4.95	5.15
78. Campus item	5.03	5.49	5.25	5.47	5.38	5.16	5.34	5.39	5.24	5.59	5.56
79. Campus item	4.72	4.79	4.71	4.91	5.00	4.45	4.88	4.74	4.72	4.91	5.41
80. Campus item	4.90	4.97	4.96	5.17	5.08	4.79	4.98	5.03	4.88	4.91	5.53
81. Institution's commitment to part-time students?	5.47	5.82	5.80	5.33	5.59	5.71	5.65	5.93	5.43	5.86	5.89
82. Institution's commitment to evening students?	5.42	5.63	5.63	5.47	5.34	5.50	5.55	5.85	5.25	5.81	5.83
83. Institution's commitment to older, returning learners?	5.33	5.74	5.66	5.49	5.33	5.57	5.55	5.69	5.23	5.78	5.85
84. Institution's commitment to under-represented populations?	5.10	5.50	5.38	5.28	5.11	5.24	5.35	5.66	5.13	5.32	5.40
85. Institution's commitment to commuters?	5.08	5.38	5.34	5.20	5.24	5.24	5.25	5.52	5.15	5.33	5.20
86. Institution's commitment to students with disabilities?	5.28	5.64	5.54	5.38	5.48	5.42	5.52	5.76	5.36	5.54	5.40
Totals	**442.01**	**101,721.88**	**457.15**	**459.93**	**451.18**	**451.57**	**452.83**	**453.32**	**442.71**	**464.51**	**473.86**

Scale: 0 (Low) - 7 (High)
Source: USA Group, Noel-Levitz, 1999

APPENDIX C
PEARSON PRODUCT MOMENT CORRELATION:
TARGET GROUPS

	Male	Female	Caucasian	African American	Hispanic	Part-Time	Full-Time	Age 1	Age 2	Age 3	Age 4
Male	1.00000	0.89913	0.95433	0.76027	0.76257	0.92599	0.95400	0.83868	0.93423	0.84828	0.82149
	0.0	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Female	0.89913	1.00000	0.97172	0.72693	0.72860	0.93615	0.97529	0.90539	0.94633	0.86165	0.79929
	0.0001	0.0	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Caucasian	0.95433	0.97172	1.00000	0.69777	0.69940	0.96154	0.97318	0.87763	0.93883	0.89065	0.83619
	0.0001	0.0001	0.0	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
African American	0.76027	0.72693	0.69777	1.00000	0.66989	0.68066	0.77412	0.69816	0.80856	0.59766	0.49709
	0.0001	0.0001	0.0001	0.0	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Hispanic	0.76257	0.72860	0.6994	0.66989	1.00000	0.71333	0.76113	0.72037	0.77605	0.58987	0.61478
	0.0001	0.0001	0.0001	0.0001	0.0	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Part-Time	0.92599	0.93615	0.96154	0.68066	0.71333	1.00000	0.90910	0.82320	0.89610	0.87495	0.84983
	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Full-Time	0.95440	0.97529	0.97318	0.77412	0.76113	0.90910	1.00000	0.90931	0.96908	0.85240	0.79513
	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Age 1	0.83868	0.90539	0.87763	0.69816	0.72037	0.8232	0.90931	1.00000	0.84294	0.74898	0.63133
	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0	0.0001	0.0001	0.0001
Age 2	0.93423	0.94633	0.93883	0.80856	0.77605	0.89610	0.96908	0.84294	1.00000	0.77799	0.73934
	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0	0.0001	0.0001
Age 3	0.84828	0.86165	0.89065	0.59766	0.58987	0.87495	0.85240	0.74898	0.77799	1.00000	0.80086
	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0	0.0001
Age 4	0.82149	0.79929	0.83619	0.49709	0.61478	0.84983	0.79513	0.63133	0.73934	0.80086	1.00000
	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0

The SAS System Correlation Analysis

Pearson Correlation Coefficients/Prob >|R| under Ho: Rho=O/N=86

APPENDIX D
DEMOGRAPHIC INFORMATION
STUDENT SATISFACTION INVENTORY RESPONDENTS

Demographic	N	%
Gender		
Female	301	58.33
Male	215	41.67
Total	516	100.00
No response	43	
Age		
18 and under	96	18.6
19 to 24	263	50.97
25 to 34	66	12.79
35 to 44	51	9.88
45 and over	40	7.75
Total	516	100.00
No response	43	
Ethnicity/Race		
African American	56	10.94
American Indian or Alaskan Native	9	1.76
Asian or Pacific Islander	23	4.49
Caucasian/White	342	66.8
Hispanic	41	8.01
Other race	21	4.1
Race - Prefer not to respond	20	3.91
Total	512	100.00
No response	47	

Demographic	N	%
Current Enrollment Status		
Day	441	93.43
Evening	30	6.36
Weekend	1	0.21
Total	472	100.00
No response	87	
Current Class Load		
Full-time	363	70.35
Part-time	153	29.65
Total	516	100.00
No response	43	
Class Level		
1 year or less	360	69.9
2 years	113	21.94
3 years	29	5.63
4 or more years	13	2.52
Total	515	100.00
No response	44	
Current GPA		
No credits earned	110	22
1.99 or below	14	2.8
2.0 -2.49	48	9.6
2.5 -2.99	82	16.4
3.0 -3.49	108	21.6
3.5 or above	138	27.6
Total	500	100.00
No response	59	

Demographic	N	%
Educational Goal		
Associate degree	292	57.82
Vocation/technical program	25	4.95
Transfer to another institution	138	27.33
Certification (initial/renewal)	9	1.78
Self-improvement/pleasure	11	2.18
Job-related training	6	1.19
Other educational goal	24	4.75
Total	505	100.00
No response	54	
Employment		
Full-time off campus	132	25.73
Part-time off campus	200	38.99
Full-time on campus	9	1.75
Part-time on campus	26	5.07
Not employed	146	28.46
Total	513	100.00
No response	46	

Source: USA, Noel-Levitz Centers, 1999

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BIOGRAPHICAL SKETCH

Judith Hornyak Bilsky was born December 23, 1948, in Cleveland, Ohio. She attended elementary and secondary schools there and in suburban Brook Park, and graduated from Berea High School in 1967. Due to her family's move to Florida, Judy enrolled in Brevard Junior College for her freshman year, transferring to Florida State University in Tallahassee in 1968. She graduated from FSU in 1971 with a Bachelor of Arts degree in history and began teaching in the Brevard County School District.

Throughout the 1970s and 1980s Judy continued to teach, gaining experience with preschool through college-level curricula. During the 1980s, she trained as a childbirth educator, and from 1988-1990 served as president of Brevard County's Childbirth Education League.

In 1989, Judy took a full-time position as program advisor at Brevard Community College, Cocoa Campus. In 1991, she transferred to BCC's newly-opened Palm Bay site, the Florida Advanced Technology Center, as Coordinator of Educational Services. During 1991, she was a corecipient of the Florida Association of Community College's Exemplary Practice Award in Student Development, for work linking student retention and student activities.

In 1992, Judy was awarded a Master of Science degree in mental health counseling from Nova University and was shortly thereafter promoted to Director of Educational Services. As the Palm Bay center grew into a full-service campus, so did the

responsibilities inherent in directing student services, and in 1994, she was appointed Dean of Student Development.

Judy began the University of Florida doctoral program in higher education administration in January 1995, taking and completing all coursework as part of a practitioners' cohort, working with full-time UF faculty at the Deland site. In May 1998, she became Brevard Community College's Interim Dean of Collegewide Educational Services, and in June 1999 was appointed to the District President's Cabinet with the title of Associate Vice-President for Educational Services. The National Council for Student Development recognized Judy in September 1999 with second place nationally for the Terry O'Banion Shared Journey Award, and in November 1999, she received the Leonard V. Koos Memorial Scholarship Award.

Judith Hornyak Bilsky is the mother of two, son David, age 21, and daughter Bethany, age 19. They currently reside in Cocoa, Florida.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

Dale F. Campbell, Chair
Professor of Educational Leadership, Policy and Foundations

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

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Lecturer, Department of Educational Leadership, Policy and Foundations

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

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This dissertation was submitted to the Graduate Faculty of the College of Education and to the Graduate School and was accepted as partial fulfillment of the requirements for the degree of Doctor of Education.

August 2000

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